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A GARDEN BOOK
FOR
AUTUMN AND WINTER



THE PAVED WALK

A Garden Book
FOR
Autumn and Winter

BY
CHARLES DOWNING LAY

*Fellow American Society of
Landscape Architects*

ILLUSTRATED



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To
LAURA

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AUTHOR'S NOTE

IF I have neglected entirely the subject of bugs and diseases in this book, it is because I know nothing of either and take no interest in them, though my dislike for both is considerable. There are any number of good books which will tell you how and what and when to spray, and to these treatises I can add nothing, except on general principles to advise against such meticulous care. The commercial grower must do everything to insure success. In the flower garden we are not so bound to an ideal of perfection and can do without phlox if the leaves get mildewed.

The list represents a certain amount of book knowledge, though it is in no sense a compilation, and I feel sure that any of the plants listed may be tried with a good chance of success. No effort has been made in any of the lists to make them complete.

The nomenclature of this book is that of the List of Standardized Plant Names, recently pub-

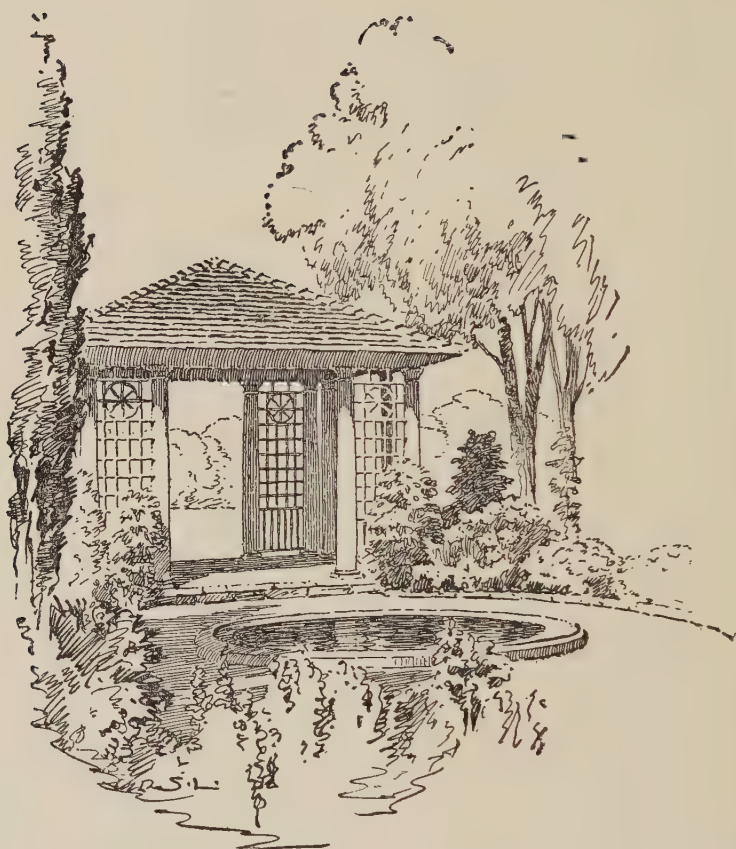
AUTHOR'S NOTE

lished by the Joint Committee of Nurserymen and Landscape Architects. Few rarities or recent introductions will be found in this book, for my purpose is not to stimulate the desires of the collector but to help as best I may in the appreciation and enjoyment of the garden.

For convenience the index has been given the form of a catalogue raisonné.

A GARDEN BOOK
FOR AUTUMN AND WINTER

THE GARDEN ITSELF



A Garden Book For Autumn and Winter

CHAPTER I

THE GARDEN ITSELF

WE cannot talk about gardens without talking of flowers, yet I would not have anyone think that flowers are the chief interest of the garden, or that it would cease to be a garden without them. There are a hundred reasons why we should have gardens and why having them we enjoy them, and flowers are one of the reasons. The supreme reason which we should always keep in the back of our heads, no matter what we are talking about, is that a real garden is a work of art.

A beautiful garden appeals to us in a thousand ways. Its soft herbage inviting one to rest, its deep shadows suggesting dalliance, have a direct emotional response. It is full of sensual delights. The sweet fragrance of the flowers, of herbs, of old box bushes, carry one's thoughts to early child-

hood memories or to times of great emotional crises. Every delight which the garden can offer is a legitimate one and should be sought, for it is like the stage in that its appeal is so manifold and must be calculated to reach our deepest feelings and wake them to attention.

The intellectual interests of the garden are to be fostered too, for even if incapable of perceiving its great beauty one can still get satisfaction from it in other ways. It is always a living, changing thing and may interest us in this way. To see the bulbs which we planted in the decline of the old year springing up in the new; to see the trees growing and changing carries us on to thoughts of our own growth and change and perhaps our blossoming.

A garden represents neatness and order in a disorderly world. It is a civilizing influence and gardening is only a more vital kind of housekeeping. It is, too, our own domain. We are lord and master of all, and find there the most perfect conditions for self-expression. And we do express ourselves unconsciously in the garden; every plant that grows, every weed left unpulled, shows our trail no less than our footprints in the soft earth.

To attain a beautiful expression in the garden so that everyone seeing it will say "Some artist has been here" is no easier in gardening than in any other art. Gardening, like the others, requires design, premeditation, and much hard study combined with considerable technical knowledge.

It is not my purpose to go deeply into the difficult question of the design of gardens. The principles which govern garden design are the æsthetic principles of any art, and are closely akin to those of architecture, for a garden is like a building: we may be in it, and fully aware of its utility, we may be moved by its emotion of beauty. Its utilitarian aspect, however, must not be allowed to influence us in a garden any more than it does in a building, for if they be not useful and beautiful at the same time neither buildings nor gardens are wholly satisfactory.

There was a tendency in the past to emphasize usefulness too much in garden design, and, taking the clipper ship as an illustration, to say that perfect adaptation to use was a determining cause of the beauty of the ship or of anything which showed such perfect adaptation. The hippopotamus, that unbelievable and comic animal, must be perfectly

adapted to its environment or use, but no one could, therefore, be persuaded that it is beautiful.

Instances must occur to everyone where there are two ways of doing the same thing, each equally good from a practical standpoint, yet where one clearly surpasses the other in beauty.

If the beauty of the garden is due to its design rather than to any of the details of its execution, we should be able to make it clear what the conditions are which give opportunity for that beauty. These conditions cannot be stated like a mathematical formula. They are incapable of intellectual proof, for the beauty of the garden cannot be demonstrated, it must be felt through the emotions.

The chief æsthetic emotion is thought to be space perception, which gives us directly an understanding of the size of the various parts of the garden in relation to each other and to ourselves. The result seems to be a feeling of ease, of expansive delight in a world which offers so much of agreeableness as a setting for our activities or for our repose. From the space perceptions come our recognition of the organization of the work; that is, the completeness of its planning so that every part has a just relation to every other part. It is

this undoubtedly that gives a design vitality so that we feel when we see it as if a breath came from it as from a living thing.

If we do not feel this we may know that it is for us dead and dull and not a work of art or a thing of beauty. By what means this vital organization is produced it is not always possible to say, and indeed a discussion of this subject must be sought in the many treatises on design and on æsthetics. All our thought of the garden and all our work in the garden must be directed to making it more perfect, more beautiful. In a garden, as in a room, we must first have some kind of an idea to start with, and after that make the composition beautiful by arranging the details of form and color. Whether the result be austere in its simplicity or luxuriously full of charming details has little effect upon the final result, and within limits is a matter of personal choice.

The idea with which we start in a garden may be intellectual. That is, we may say to ourselves "We will have a rock garden, or a rose garden, or an old-fashioned garden," but it must become an artistic idea if it is to be successful. Since its appeal must be chiefly through the eyes to produce

the emotions of beauty, its quality is a matter to be determined by its appearance rather than by any theory of what should be right. To trust to our eyes in this, when all our training tends to make us think and forget to feel, is not easy, yet if we make up our minds to let ourselves be receptive to emotion, we shall be able to get ahead faster. The interplay of emotion and intellect is a difficult question, but it seems safe to allow them to alternate, first receiving the emotion and afterwards considering why it was a pleasant one, or why it failed to be satisfying. In this consideration it is useful to determine whether the garden has harmony, is complete in itself and is not showing the effects of an attempt to combine in it too many different qualities. It cannot be Italian and French and Dutch all at the same time. It is harmony of spirit rather than of lesser qualities, such as color, that we should seek. Harmony is easier to talk about and to attain than the other qualities which are even more valuable in their emotional effect, for harmony is a negative thing indicating the absence of conflict in other attributes.

Rhythm, which in matters of vision, means the ordered repetition or succession of similar shapes,

or lines, or colors, has a great emotional effect and is the surest means of avoiding dullness if it be well handled. It is the inciter of those agreeable movements of the eye which through their muscular effect give us the pleasure of bodily movement.

Balance, which means that there is an equal weight or an equal attraction on each side of the scene is quickly felt and easily understood. It is secured most easily by perfect symmetry, where one side of a central axis repeats the other, and indeed the formal or symmetrical scheme has a quiet dignity and is always satisfying. An asymmetrical but balanced composition is more difficult to handle in gardens but may be charming.

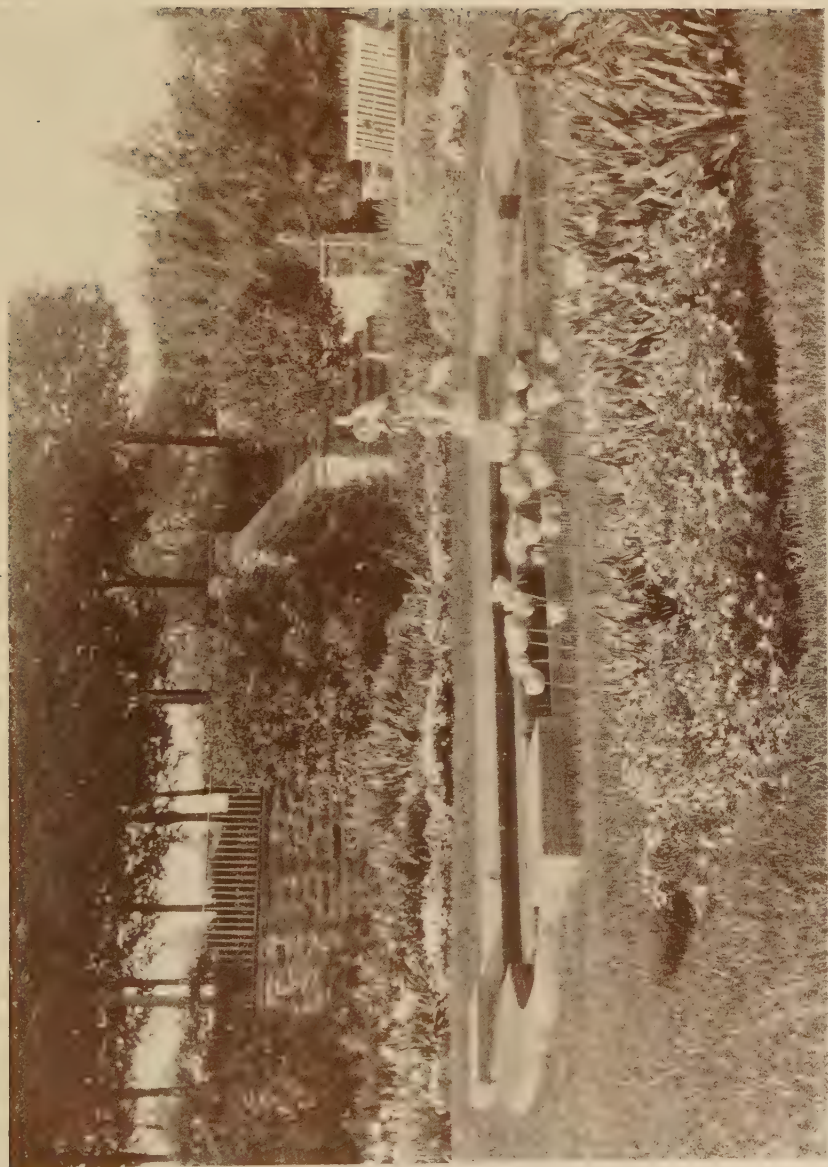
The insipidity of too perfect harmony in rhythm or in balance or in the lesser details can be avoided by throwing the composition out of harmony by contrast of shape, color or movement. To attain the point of great and stimulating contrast and at the same time preserve harmony is the height of perfection in any art. The contrast of rhythm is stillness or lack of movement. For balance there is, of course, no contrasting quality, it is either balance or not, yet the "occult balance" has all the merits of contrast, or rather none of the faults of

symmetry. It is a balance of attractions for the eye rather than a balance of objects and may be seen in great perfection in Chinese paintings and in Japanese prints.

We tire soon of the scene which is repeated on one side just like the other, and if we must always see it on axis the eye grows weary in moving from side to side, finding difference in neither and dullness in both. We welcome the view which balances a tree against an arbor, or a small touch of bright color against a larger mass of neutral grey. We also tire of too great emphasis. We prefer the quiet maple to the vehement Lombardy poplar.

The greatest delight is to have the eye led on from one entrancing detail to another, constantly moving, constantly interested by form, or by color; or by length, direction and character of movement, to return at last to the point of beginning, only to start another and different trail through a wonderland which is ever the same but ever different.

I shall have much to say in the chapters which follow of the many details which add to the delight of the eye in one way or another, and of the sensual and imaginative pleasures which one can have in a garden, but we should always remember that



FLOWER GARDEN AND BOSQUET

these things are only means to put us into a state which will be favorable for the reception of an emotion of beauty.

We may for a time be unaware of many of the things which together attack our senses, but their effect is not less strong on this account.

The sensual impressions made by a steamship or a railway train may be pleasant and unpleasant at the same time, but in a garden they are all pleasant. No designer has as yet thought of introducing discords in order to heighten the pleasure in the sweetness of the garden. This might be hard to do, for we have widened the range of our sensual enjoyment so much beyond what was formerly thought agreeable, as in music, for instance, that it is difficult to find a sound which would be unwelcome, or a color, or a discord of any kind incapable of heightening the total effect. In the bird orchestra has not the voice of the peacock a place like the piccolo in the symphony?

We are told that the sweetest perfumes are compounded of vile stench, so a happy result might come from a skillful management of uninteresting or even disagreeable features. It is imaginable

that a pleasing composition could be made with ragweed, burdock and potato vines.

I would wish to be modern enough, in designing a garden, to give it some vigor of expression, some roughness of texture and rigidity of form. There may well be deep shadows in its brightness and somewhere Cimmerian darkness at noon time.

To smooth down all impressions to the level of Victorian taste, to have every form softly sensual, every color a tinted grey, is carrying harmony too far and results in a tiresome neutral impression which fails to give lasting pleasure.

If the garden is to be an expression of the owner's or of the designer's personality, it is to be hoped that one or the other has something to express, even if it be nothing more than a passion for blue, a love for scarlet or a distaste for aniline red purples in phloxes. That the personality should be so strong as to be indifferent to anything except its passionate craving for organized vitality in the design is scarcely to be hoped, yet it is in this rather than in trappings of autumnal woe or the bridal wreaths of spring that beauty is to be found.

The garden which depends upon such funda-

mental qualities for success, has the advantage over the merely delightful collection of flowers that it is almost as good to look at in winter as in summer, and indeed gives us greater variety. Its range of delightful color runs through the year with infinite changes. No season is so good for a valuation of the garden's artistic qualities as winter, when it is free from many of the sensuous delights of color, fragrance and soft airs.

We must not think that gardening is over with the first frosts, or that the enjoyment of the beauty of the landscape ceases with the falling of the leaves. What is true of the garden is true of most landscapes. If they are interesting at all they are most interesting in winter.

A hilly or mountainous country is never so pleasing as when the leaves are gone from much of the forest and one sees the form of the hill beneath. The rocky ledges, the varied modelling of the slopes are a constant delight to the eye, which uses the playing lines of these features to make for itself fascinating compositions and to organize anew each part of the scene.

In summer these beautiful details are lost under a sea of green which is itself none too interesting,

and not to be compared with the warm tones of winter which surpass the colors of summer in delicacy at some times as they do in strength at others. The evergreens, in winter, have an interest unknown in summer. They are stronger and more insistent in their shapes and colors. In snow they give the greatest possible contrast of dark and light.

Our Druidical inheritance makes us think perhaps that we admire a big tree for itself alone, but I think it is of most value as an object in the landscape; it helps in the perception of space and gives size and meaning to a scene which without the tree would be uninteresting. This value, if the tree is deciduous, is not so great in winter but it is still there.

To enjoy the winter landscape requires some fortitude, but with experience one learns how to be more comfortable than in summer.

There are, as I have said, a hundred reasons why we should have a garden and why having it we enjoy it, and it is to be expected that an interest in plants will be one of the reasons. But this should not be allowed to become the predominant interest, as it is in so many gardens. People can be just

as silly about collecting plants as about collecting postage stamps, and the garden of such a collector is likely to have no more artistic value than a stamp album. Nor is there anything more tiresome than to be shown over the collection, whether stamps or plants. We may for a moment be interested in the curious aspect of this or that plant from Africa or Kamchatka, but a collection of such things is too much. Many types of gardening easily descend to this low level. The rock garden may be just a catalog of rock plants; the shrubbery an ill assorted lot of bushes and the woods an arboretum. This is all a little old fashioned to be sure, for the botanists who were once only interested in plant species and varieties have in a way exhausted that field and are turning to the study of plants in relation to their environment. This new study is called ecology and I expect it to be productive of much good, in preventing our constant experiments and almost as constant failures in growing plants in a somewhat artificial environment, and in training our eyes to see greater beauties in a more restricted list of plants which are not only native of the north-eastern country but of our particular district. The eye trained to

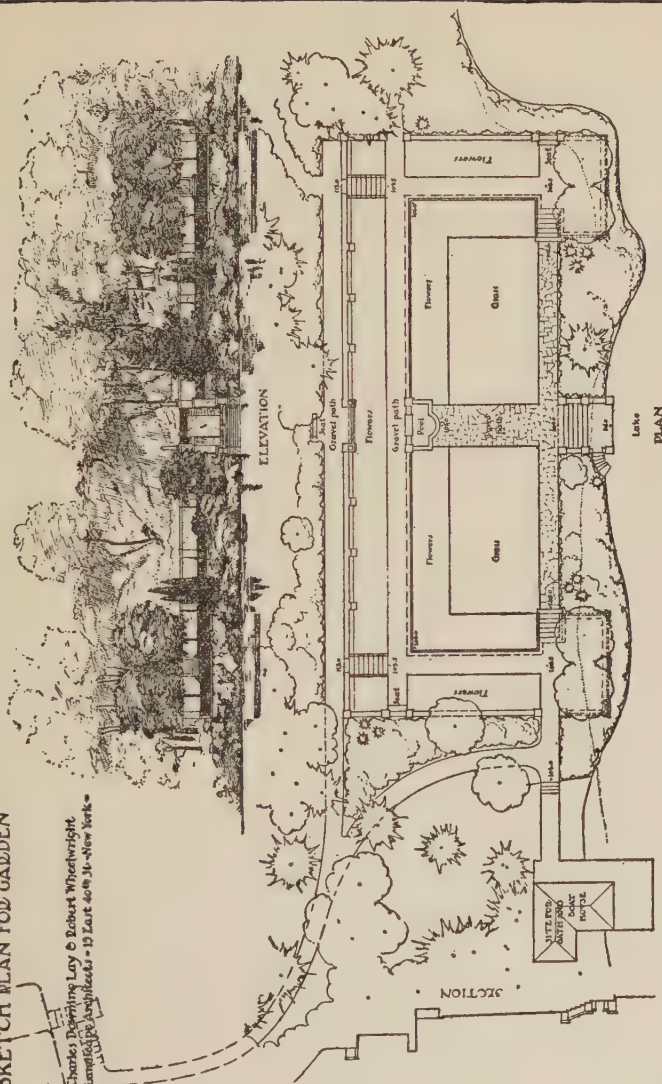
such niceties finds it as ridiculous to see a Colorado spruce on the shores of the Great South Bay as to see a piano lamp lighting the kitchen sink.

We may, without great harm, become specialists in the plants of our locality or in those adapted to any given set of conditions, so long as we keep our artistic aim for a beautiful garden before us. Specialization of this kind in the rock garden would mean that with real rocks and with such adjustment of sunlight by means of more or less shade, we accept conditions as they are and grow only the plants which are suited to these conditions, without extra water or great extra care. A rock garden planted on this system of choice would be permanent and would need little care except the destruction of tree seedlings.

In this part of the country any spot left alone for long will become forest and it would be pressing rationalism too far to say that because this is natural it is right. Like all scientific studies, ecology must be the servant not the master of the artist and every gardener should be in some degree an artist. It is, therefore, not necessary that the plants we use should be in fact native to the district, it is only necessary that they appear to be.

SKETCH PLAN FOR GARDEN

Charles Derrington Lyle & Robert Wheelwright
 Landscape Architects - 15 East 40th St. - New York -



Scale 1/8" = 1'

Sheet No. 100-1

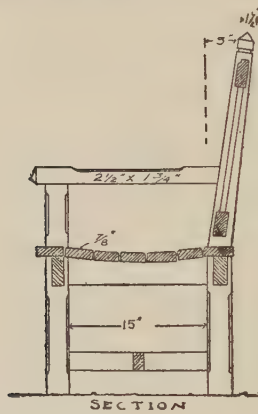
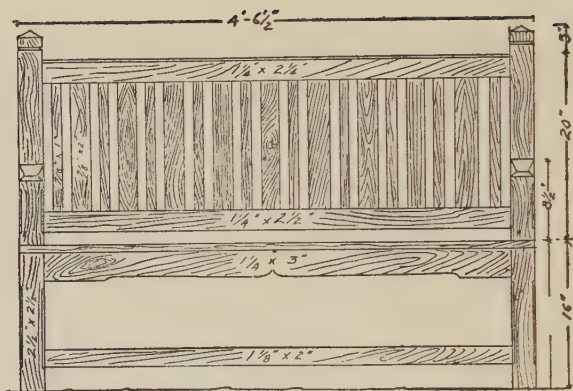
A GARDEN BETWEEN LAKE AND LEDGE

This, of course, puts us under certain limitations, but they are bound to have the same effect in producing unity or harmony that the restricted palette has for the painter. Though ecology may hasten this happy result, it was bound to come, for the restrictions which the Department of Agriculture is putting on the importation of plants will surely reduce the number of exotics brought into the country.

Horticulture here has suffered a great deal from the ignorance of our people concerning native plants. Many of them are hard to grow in the nurseries, which are over stocked with cheap and hardy foreigners, while our own less assertive natives can be found only in the backwoods.

The plants of Japan, which were imported from Japan and from Holland in such great numbers, have done much to disfigure our suburbs. The retinosporas and others of that tribe, which are so taking when young and in the nursery, soon become scraggy, unkempt wrecks when planted about the house. What they may be in Japan I do not know, but they are not pleasing here except in the nursery. Most of them will be mentioned only with derision in this book, if at all.

STYLE AND EXPRESSION



CHAPTER II

STYLE AND EXPRESSION

THE style of a landscape or of a garden is usually subject to two influences. It must, first of all, meet and give perfect expression to all the features of the site; that is of the geologic condition which has been created. It must be quite obviously the right thing for that place. This should be seen in the construction of all its features, in all the planting which has been put in to give an originally pleasing scene the greatest richness of detail. Second, the whole must harmonize in every particular with the tastes, the desires and the mode of life of the owner or of the public which is to use it. The success on these grounds of any work must be judged empirically, not rationalistically, for as our desires and habits change the type of landscape or of garden which we consider appropriate may change also. The success of a new plan or a new arrangement in meeting new conditions cannot be judged in advance by comparison with existing standards. It

must be judged by trial after habits and customs have become established.

A common instance of this is to be found in the change from horses to motors. At first motors, being only horseless carriages, were put in the stables which were placed with regard to the conditions of a stable. Now we are quite certainly reaching the point of putting the motors close to the house or in an ell of the house, or, as the last step toward convenience, in the cellar of the house.

Driveways in parks and on country estates, and forecourts on suburban places have been long in reaching the point of reasonable design for the use of motors, for we have been slow to think in terms of the new vehicle.

The difficulty of securing domestic help and our dissatisfaction with it when secured will have an inevitable influence on the size and character and the design of all our landscapes and gardens.

This is not, I think, a condition to be regretted, for the result should be to turn us from the laborious practice of the fussy kinds of horticulture to a deeper thought of the artistic qualities of a garden and toward a kind of garden which depends for its success on permanent features rather than on the

fleeting beauty of planting which soon perishes or outgrows its charm. It will, I think, be an influence for smaller size and higher quality in design and in execution. It is likely also to bring about a sharper line of separation between the well kept and formal parts of the place and the outside wilds, so that the one is concentrated order and the other rampant nature, or at least nature intended to appear as if free from interference. If in this change we lose the suburban park-like lawn dotted with specimen trees, the gain will be immense.

Within the limits of suitability and use, which I have pointed out, there are endless opportunities for the perfect expression of the designer's personality or of the owner's idiosyncrasies. We need not fear that these conditions will seem hard or result in a fixed type. I believe they are on the contrary a stimulation to effort on the part of the designer and that they will produce in the public a critical taste which we have never known before.

It is the belief of many that professional help should not be sought by the owner who wishes to improve his place and make it fit more perfectly his own taste. People sometimes talk loosely about expressing themselves, and fear the touch of other

hands on work which they wish to be their own. But they forget that their knowledge of the technique is as insufficient as their strength to permit them to carry out the simplest ideas. If they employ men who are only craftsmen the work will inevitably express them and their possibly mediocre ideas, for the owner usually lacks the power to control or direct the workman. Grading foreman, bricklayer, stone mason, road builder and nurseryman, each will do quite honestly what he considers best, but it is often a best determined by habit and unaffected by wide experience with many methods.

The professional designer with his knowledge of materials and of methods, his freedom from the restraints of local fashion, is much more able to help the owner express his own personality. He is likely enough more conscious of the personality and understands it better than the owner himself. It is quite possible, and I think not undesirable, that two personalities should be expressed in the same work. First, that of the owner in the broad aspects of the work, since it is he who determines what shall be done and on what scale. The inclusion or the omission of this or that feature is

determined by the owner, while the designer puts his personality to a certain degree in the details, in the technique of execution.

The designer must be responsible as well for the æsthetic qualities of the work and see that it fulfills the conditions of all works of art in having harmony, rhythm and balance.

It cannot be thought a detriment that the designer should show by slight details the authorship of the work. This is shown inevitably in the work of every artist. There are tricks of handling, short cuts to the result, indecisions and empty places in the work of every artist, no matter what the medium, and these are recognizable by the knowing on sight. If these marks are slight, they add interest to the work. If, however, they become a fixed habit in design they may be, because of too frequent repetition, tiresome. The more proficient the designer the less likely it is that he will acquire a set habit or tiresome style.

It is fair to ask what may be expressed in a garden or landscape that is worthy of expression. We can show in the garden that the owner and designer have lively reactions to the outside world; that they are, in other words, quick to see and to enjoy

and have a mental and emotional equipment which makes it possible for them to feel deeply.

To see another's garden may give us a keen perception of the richness or poverty of his personality, of his experiences and associations in life and of his spiritual qualities.

Public parks may give the designer a freer hand than private work, but there is always in park work an impersonal client or a vicar for such a client and one always feels the public as an exacting, rather ignorant and capricious, owner, who may at any moment object or criticise or misunderstand. Some designers, I think, feel this too keenly and are held back from full expression of their desires by mistrust of the impersonal public. The danger seems in most cases to be that the designer hesitates to make the work as rich in imagination as he can, and fails to catch the fancy of the public, who finding that it lacks the gaudy features to which they have been accustomed in suburban work, are unmoved by the quiet good taste which is the only expression the designer has permitted himself.

Timidity was not the quality which appealed to the committee when judging the Central Park

competition that was won by a daring idea. Nor is timidity the course which brings success in architecture. There was nothing timid about the Washington Monument, nor about the Woolworth Building, and both are universally admired.

It is evident to me that we are becoming more critical of design in gardens and landscapes and judge them more fairly and with more regard for their artistic qualities than ever before. We have passed in our appreciation of this art the stage which we were in thirty years ago in regard to architecture. Anyone who could direct carpenters or do a mechanical drawing was an architect, and if there was no one of that calling around we were content to have a builder design a house for us.

Photographs as reproduced in the magazines have helped in our keener feeling for gardening. Everyone knows today what every new house looks like, how the gardens and grounds are laid out and what flowers and trees grow in them. We have thus established among thousands of people standards of taste which must soon have a great effect on the appearance of our countryside. It is not only the houses of the plutocracy that we know intimately but also the cottage for the mechanic.

We may some day become aware that we have established a type of house and grounds of great excellence artistically and unequaled anywhere for comfort and convenience. But in spite of the value of photographs, we should beware of the danger of judging the work too severely or too generously from its photograph. There has never been a garden, however lacking in the perfection of artistic qualities, in which a charming photograph could not be taken. And there are many gardens which fail to show their loveliness in photographs.

As a means to studying one's own place, a plan drawn to scale on paper is of the greatest assistance, for it brings within the grasp at once all the features of the place and their relation to each other. Studying first on paper, then on the ground and then on paper again we are sure to reach an understanding of the problem and a conclusion which is likely to be right, though not the only one. For the same reason it is the part of wisdom to make a plan of the whole place before anything is done on it. If one thing be done without consideration of the whole it is likely not to fit or not to be right when we do the next thing.

The advantages which a scale plan gives in

studying the relations of a place or the design of a garden are great, but the difficulties at first are considerable, for a plan of a garden or a landscape represents three dimensions instead of the two dimensions which are sufficient in any plan or elevation of a house.

It is puzzling to visualize, as one looks at the plan, the changing levels of reality, so that the beginner finds a complete realization of the whole remodelling of the surface hard to grasp. The contour lines of the plan which convey the shape of the surface so quickly to the experienced person, do not, it seems, give the same sure knowledge to the inexperienced. It has been suggested that models, since they represent three dimensions, would make it easy to explain a scheme, but they are expensive to make and they have this fault: they are objects and we are likely to judge them as such rather than using them as a means for visualizing actuality. A model may be fascinating and wholly satisfactory, yet the place when built may be disappointing. A hill modelled to a correct scale may seem insignificant, yet in reality be an insurmountable obstacle.

The difficulty of presenting the merits of a land-

scape plan on paper or in photographs is almost impossible to overcome. A sketch in perspective gives perhaps a better idea of the intention than a plan, but both fail in representing differences in levels which, however slight, are of the greatest importance in the work itself. An exhibition of landscape plans can give to the person who is untrained in looking at them only an idea of the extent and the complexity of the work. It is seldom that they give any notion at all of its quality or possibility of beauty.

A comparison, for instance, of the plans of Central Park and Prospect Park would leave one in doubt as to which is lovelier. They would in fact seem quite similar except in size and shape. Yet when they are seen it is evident that they have little in common, that they are different types of landscape. It is the same with gardens. The "feel" of one garden may be entirely different from another of similar plan.

If I speak of the spirit of the garden I may be thought sentimental or mystical, but it seems to some people to be a real thing, independent of its æsthetic quality but important in forming our likes and dislikes. I have been in rooms and felt that



CEDAR AND RHODODENDRON

I could never live in them, knowing that my disgust with the whole would increase from day to day until I should be forced to stay away. I have seen pictures, too, which fill me with a deep dislike. It is not different with gardens—they may, it seems, put our spirits at ease so that we are content to stay there; are ever interested, soothed and entertained by what we see; can, as it were, make ourselves at home. In other gardens or other scenes we are conscious of a vague unrest, a troubling of the deeper wells of feeling which makes us reluctant to regard the scene and anxious to get away. It fills us with a longing for action. I cannot, as I have said, guess the cause of this strong difference in the spirit of the garden. The reasons may be wholly due to its reaction on our sense of beauty, but whatever they are they are worthy of the same thought that we give to the spiritual significance of our homes, which we are ever trying to make a more perfect expression of souls in equilibrium; not swayed by a thousand passions but with a calm repose which permits deep feeling and great spiritual accomplishment.

There is throughout the country a strong incli-

nation to formalize all works of landscape architecture. For this the architects are in part responsible, but it is also the natural result of our increasing culture and our desire to live in an environment which is in every detail consistent and in harmony with our life. Formalization, too, furthers our wish to carry the influence of the spirit beyond the borders of the mind and into reality. As we become more civilized we take less pleasure in the accidents of wild nature and long for order and a definite plan in all that we do. This was indeed our feeling, competently shown in the architecture of the early republic and in the planning of our cities, but it was interfered with by romanticism, which led us to worship the picturesque, the accidental and the unexpected in nature. Untouched nature thus came to have a kind of sanctity because man's influence could nowhere be felt. As we used to say, "Where every prospect pleases and only man is vile."

A more sensible view prevails today and we see in nature nothing higher than ourselves; the wild landscape having lost its mystical perfection is interesting only as an environment for man. The next step in common sense thinking which we

should soon take is to consider all man's works as much a part of his natural environment as the home of the beaver or the muskrat. This relieves us of the former necessity of looking on the city and the railroad as something artificial and unlovely, interfering with nature and to be excused as a fault which may be outgrown. In our country places the tendency to minimize the importance of natural accidents is clearly manifested. We feel no longer that the shrubbery must be a tangle and the lawn be an unrestricted space dotted with trees, planted, as someone recommended, by throwing a bushel of potatoes one by one in all directions and planting a tree where each is found.

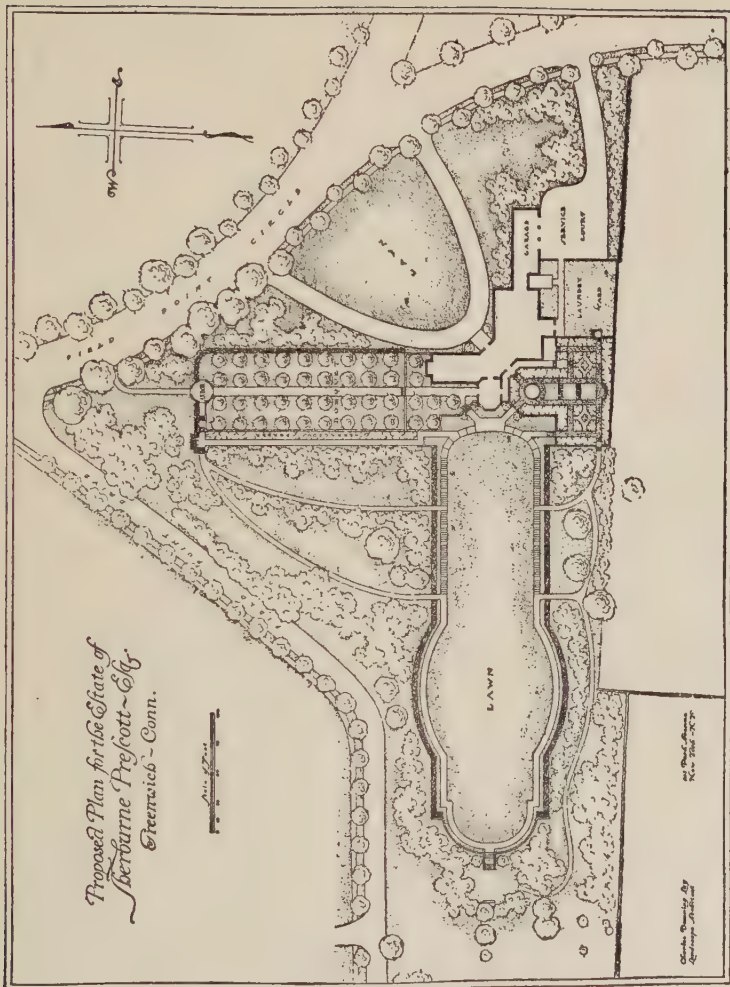
We are free now to plant in rows or in pairs, and we delight in a sharp line of demarcation between the formally laid out parts of the place, which repeat or accentuate the scheme of the house, and the more or less wild and unkempt spaces beyond. We gain by this formality in the midst of informality a pleasing contrast and in the formal, or ordered portions of the place, we enjoy unthinkingly the design, the most charming evidence of human feeling and hence the highest expression of the common nature from which we spring.

Our progress in the direction of a higher organization in the surroundings of our houses has been helped by a deeper understanding of what nature left alone may really be. The lawn which we used to think of as a charming natural feature, is seen to be highly artificial, and an ostentatious display of wealth. It represents, moreover, only a temporary phase in the operations of agriculture and left alone must soon be ploughed up for some crop or it will become a forest.

Would it be too cruel to inquire why if a lawn can be mown a tree cannot be clipped without offense to the worshippers of natural beauty?

We can do as we please with the landscape, with the trees, or the grass, so long as we are guided by a desire to produce a work which is organized and designed to stimulate the beholder to feel an emotion of beauty. Our work often fails in this æsthetic stimulation, for a place which in other days might seem satisfactory since it pretended to offer nothing more than convenient access to the house, agreeable views from the windows, and lawns and trees, becomes when formally developed a challenge to criticism, and any feature which is not delightful is, because of its attempt to be so,

*Proposed Plan for the Estate of
Berthorne Prescott - Esq.
Greenwich - Conn.*



*Charles D. Smith, Esq.
Architect, New York*

*Wm. H. Smith, Esq.
New York*

A SUBURBAN PLACE ON A DIFFICULT LOT

offensive and drives us to unreasoning and distracting hate.

Formal work seems easy to the unthinking, for it must be if successful obviously right and at the same time it must be free from eccentricity. It appears then quite simple to do. Yet the great designs are not so many that their value can be lightly regarded. In the hands of the incompetent, formal designs result in dullness, in meaningless repetition of inharmonious features, so that the scheme as a whole shows no invention, no activity of mind, no inspiration, and lacks the vitality which at once impresses us in a real design.

There is a type of design common in Europe which we might well try here. It is as if the house were put on the axis of a street or *allée* with a view of the distance to be sure, but with no concern beyond the straight unbroken sides. We are thus restricted to one view and the development of the narrow space between the sides of the *allée*. Such a scheme gives plentiful opportunity for brilliant and moving design, can be embellished as we wish, and avoids some of the pitfalls of our usual attempts to cover the whole landscape with our works and to see it all at once.

A strip cut in the deep woods with the house at one end looking down a slope to distant blue beyond simplifies the problem and gives at once unity or harmony which few of our large country places now possess. It is not the highest type of design but it offers many delights to those untrained in the subtler beauties of occult balance and rhythmic vitality. As a stage for the ordinary activities of social life the restricted plan has many advantages, while for the poet or the artist or the philosopher the more complicated problems of the freer kind of design are more pleasing.

The technique of gardening art must keep pace with the brilliancy of its design. I speak, of course, of a kind of artistic technique, not of a horticultural technique which is usually too competent. Our gardeners are clever enough at growing the kind of things they know about, but the designers must overcome their conservatism or ignorance and insist that they learn to grow what he wishes. That is, the shrubs and plants which will give the expression he desires and add interest and variety to the details of the work. Our large estates when well designed, which has not often happened, are frequently offensive in the dull and

commonplace way in which the details of construction and planting are carried out. It does not matter, of course, how simply the result may be attained, it is not a question of using rare and striking plants but of using those which give us the impression of being in harmony with the conception of the place which the designer is attempting to express. In painting, for instance, there are ideas which can be done in black and white, others which seem to require color. In formal gardening the privet or the ivy for bedding may be more pleasing than the brilliant and restless coleus, canna and caladium.

In this technical imagination, the landscape architects, though too often led astray by horticultural ideals, are better than the architects who, lacking knowledge of plants, leave the details of their design to be executed by florists or nurserymen. The architect is often chided for his ignorance of modern art, and it is curious that men so well trained in design and with such a sure judgment, should be blind to the vitality of a pictorial design, simply because it does not state facts of color or anatomy as they know them. If, as Clive Bell says, the cubist must become an architect, it

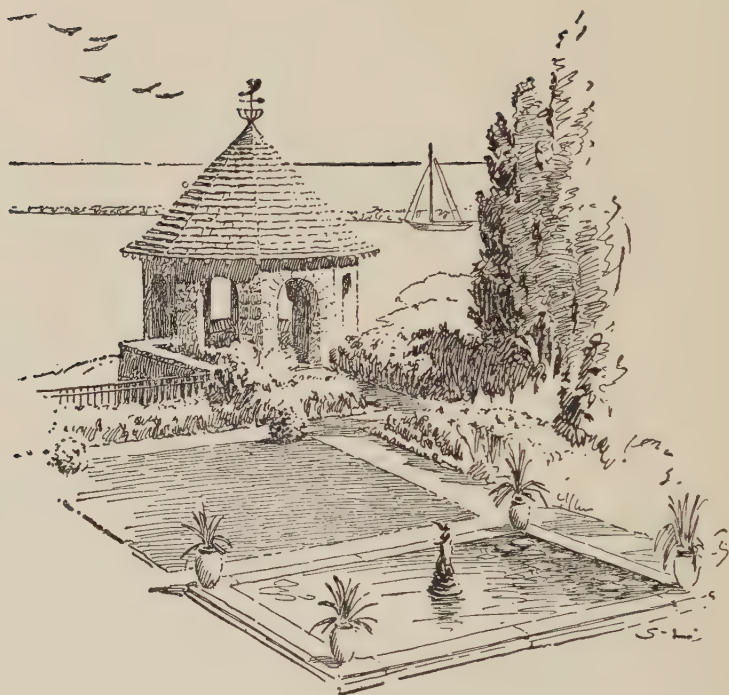
must be evident that the landscape architect has at hand an opportunity to be a modern of any school, for he can express abstract ideas in æsthetic terms. He has infinite variety to choose from in the shape of his materials, which can be cone-shaped, spherical, cylindrical or rhomboidal (by means of clipping) and these shapes can be arranged in any way he pleases to produce enchanting compositions in space and to convey directly an unmixed æsthetic emotion. With the help of architecture and terracing and the shapes produced in grading it would be entirely possible to produce the effect required of sculpture, that it be pictorial—that is unified in a plane.

Nor should the landscape architect hesitate to produce the effects of the stage and arbitrarily restrict the point of view, and if it seem desirable have artificial lighting with the full stage equipment of color, dimmer and spot lights. Gardens lighted at night have a new and magical fascination and infinite possibilities. To imitate the firefly by means of tiny electric lights, to give the air of festivity in a different and easier world by means of Chinese lanterns strung through the trees or to simulate at midnight the effects of dawn, sunrise

and noon adds to the pleasure of the garden and makes possible an evening garden party which may have some of the thrills of the theatre.

I look forward with delight to the opportunity to plan a modernistic garden or park with artificial lighting and to seeing many such gardens. They will be a relief from the soft sensuousness of most of our work and may possibly fulfill in a higher degree the condition of any work of art: that it arouse in the beholder the same emotion which the creator felt.

AUTUMN FLOWERS



CHAPTER III

AUTUMN FLOWERS

AUTUMN in many gardens is the season of stupidity, of barrenness and of neglect, but it should not be so, for autumn flowers have an opulent luxuriance combined sometimes with great brilliancy of color, sometimes with great delicacy, which spring seldom equals with its blaze of tulips, its narcissi and its columbines. The autumnal stupidity of the garden is often caused by the excessive use of somewhat tiresome annuals which have been blooming for a long time, and it seems, would bloom forever were it not for the gentle frost which peacefully cuts short their boresome existence! Or it may be due to the neglect of the true autumn flowers, which are distinguished by blooming first and only in autumn. The flowers like larkspur, which have a second season of bloom in autumn, are not to be considered autumn flowers though they may be of value in the autumn garden. To secure the greatest beauty of the garden in autumn

we must depend upon plants which are truly in season then, for seasonableness in the flower garden is of first importance.

Some gardeners make the mistake of starting their annuals early and having them in bloom long before the normal or necessary season. China asters, gladioli and dahlias in July are not worth having, for there are then so many beautiful perennials in bloom that we fail to enjoy the unseasonable annuals. One charm of flowers is their unswerving faithfulness to the almanac. They tell us the season no less surely than the stars. Thoreau declared that he could tell the date to a day by the flowers if he were suddenly awakened after an indeterminate sleep. Such accuracy of observation is impossible for most of us, although we feel the spiritual significance of the flowers blooming at their appointed times.

There is no trouble about having autumn flowers in the garden, so long as the frost holds off, but there is some trouble in finding good flowers that are also able to endure a frost. The eccentricities of the first frost are sometimes interesting. Gardens on a slope where the cold air can run down to a lower valley are seldom injured until a severe

freeze comes. Hilltops, too, usually escape the early frosts, though as the altitude increases so do the frosts, so that in some hill towns there is no month in the year without frost in the valleys. Near lakes and rivers the frosts are held off remarkably. I have seen the tomatoes still green on December 1st near the water of Long Island Sound, and, of course, the garden season is much longer close to the ocean shore of Long Island than it is on the hills of the North shore. But, however late the frost may hold off, when it comes the garden is too often finished for the year. This is a pity, for our finest weather is likely to come after the first frost and there may be a long time left (though the days are short) to enjoy the garden. The flowers of our Indian summer have their characteristic delights which seem to fit the season.

The *compositæ* is the royal family of the garden in autumn, and the reigning queen is cosmos, the easiest to grow and the hardiest of annuals. No flower is more beautiful in form and color and in the prodigal luxuriance of its bloom. They are indispensable in any perennial garden where the season is long enough, because they can be transplanted to any odd corners after some

spring things have bloomed and will be unnoticed, except for their tender green feathery stalks, until October, when they burst into bloom in a day. Cosmos can be planted with oriental poppies, back of the pæonies, in a corner by the iris, in the bed for foxgloves, and in many other places where spring flowers have left a bare place or where the flowers of spring give room. Do not plant them too early and rush them on too fast, and do not bother with the early varieties, which are not beautiful and come at a time when there are plenty of better flowers.

Next to cosmos in beauty, and more important because they are perennials, are the hardy asters. There are none more lovely than our wild asters which, with few exceptions, behave themselves in the garden. They can be collected by thousands along any roadside and need little care in the garden, where they may be more charming than in their native environment; but being perfectly at home anywhere they may possibly take on some of the characteristics of weeds when used in the garden. There are many beautiful hybrids and new ones are constantly being introduced. Seventy-two native species are given in "Britton & Brown,"



CLIMBING ROSE IN AUTUMN

and all are probably useful somewhere, but the following list comprises the best natives and some European varieties. All can be bought in the nurseries. A wild aster which promises to be useful under certain conditions should be collected and planted in the garden without hesitation.

Aster amellus, Italian Aster, dwarf 2 feet, August-September, purple, orange centre.

A. amellus bessarabicus, Bessarabian Aster, dwarf 2 feet, August-September, purple, orange centre.

A. cordifolius, Blue Wood Aster, 4½ feet high. One of the best for naturalization under the light shade of some trees, though it does equally well in full sun. The plant is crowded with blossoms of a delicate blue, which in mass are lovely, though they are insignificant in themselves and not much good for cutting.

A. ericoides, Heath Aster, tall 3 feet. White or rosy tinged. Dry soil.

A. laevis, Smooth Aster, tall 4 feet. September-October. Light blue or violet in dense panicles.

- variety *harvardi*, rosy mauve, tall 6 feet.
 “ *pulcherimus*, lilac.
- A. *maacki*, Hakone Aster, dwarf 2 feet.
 August-September, lilac-blue.
- A. *novae-angliae*, New England Aster, tall 7 feet. August-September. Rich violet, yellow centres. The handsomest wild aster. Many hybrids of various colors. Among the best,
Lil Fardell, clear pink.
Feltham Blue, clear blue.
Glory of Colwall, pale lavender.
- A. *novibelgi*, variety *Peggy Ballard*, rose lilac.
 “ *St. Egwin*, rose pink.

Some of these asters are a little bit weedy in appearance and should be planted at the back of the herbaceous border. They need room to grow and should not be crowded early in the season. After June the tall ones will generally be high enough not to be interfered with by other plants. Asters are useful in the shrubbery and the wild garden, and are indispensable in the rock garden. Many of them can be naturalized under trees in partial shade. *Aster cordifolius* is particularly

useful in this way and blooms so profusely that the small flowers give a mass of beautiful color. Being a common weed in this country we have neglected it, but in Europe it is much admired and many hybrids and varieties have been introduced.

Other flowers blooming in September-October are:

Aconitum autumnale, Monkshood. Should be left undisturbed. Needs leaves for protection in winter. Rich soil, half shade or sun. Four feet high; flowers, blue, lilac or whitish.

A. *fischeri*, Azure Monkshood, 4-6 feet. Pale blue flowers.

A. *napellus*, var. *Wilsoni*, Violet Monkshood, violet flowers.

Actaea alba, Baneberry, 1½ feet, valuable in autumn for its white, purple tipped berries on red pedicels.

A. *rubra*, Red Baneberry, 2½ feet, white, dense spikes of flowers. Red berries. Rich soil.

A. *spicata*, Black Baneberry.

Anaphalis margaritacea, Everlasting, 1 foot, white or yellow flowers.

Anemone japonica: (see p. 57.)

Anthemis tinctoria, Camomile, 3 feet, daisy-like, yellow flowers, blooms throughout the summer but is useful in autumn.

Boltonia asteroides, Boltonia, tall 8 feet, white.

B. *latisquama*, Boltonia, medium 4 feet, lavender.

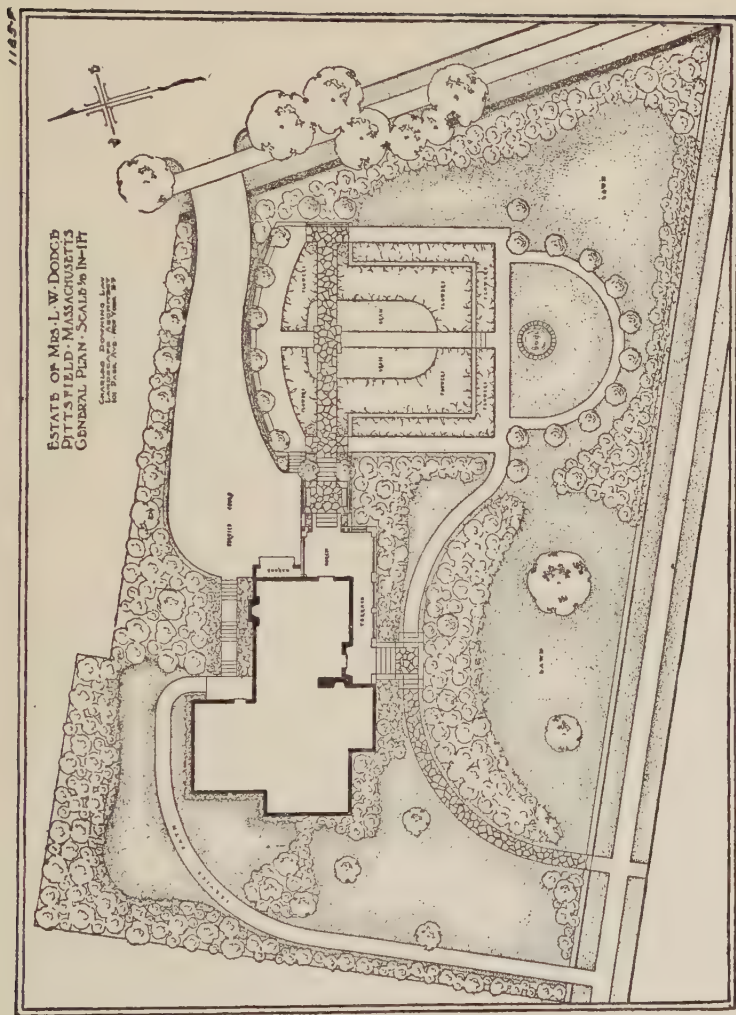
Caryopteris incana, 3 feet. Blue *Spiraea*. Cobalt Blue. Tender north of New York but comes up from the root each year. The foliage being grey or downy seems to take a bluish cast so that the whole plant appears blue when the flowers are in bloom.

Ceratostigma plumbaginoides, Plumbago, dwarf 6 inches. Blue flowers turning purple. Lovely but tender and needs protection.

Chrysanthemums (see p. 56.)

Clematis heracleaefolia, Tube Clematis. 3 feet, shrubby plant with blue flowers.

Colchicum autumnale purple, Autumn-crocus. Bulbous plants. Flowers after the leaves. Takes some room in spring but can be



grown near the paeony or in other places where spring flowers give room.

C. parkinsoni. With tessellated flowers.

Crocus sativus, Saffron crocus. Bulbous, fragrant, lilac flowers.

C. speciosus, Bright lilac. Are like Colchicum.

Dahlia, Dahlia. Many varieties useful in the garden and for cutting. For details consult any monograph on the dahlia.

Eryngium amethystinum, Eryngo, 5 feet. Wonderful blue of flowers and of the branches makes it valuable in masses.

E. maritimum, Seaholly.

Eupatorium purpureum, Joe Pye Weed, 10 feet, pink, purple, or white. One of our handsomest wild flowers. Is through blooming in early autumn.

Gentiana andrewsi, Closed Gentian, 2 feet, blue.

G. crinita, Fringed Gentian, (see p. 58.)

Gladiolus, Gladiolus, 5 feet. Will bloom late if planted late. It is not useful in the formal garden but should be grown in the vegetable or cut flower garden. A wide

range of colors, many of them unusual and interesting.

Helenium autumnale, Sneezewort, 5 feet. Yellow daisy-like plant. May be used in the back of the border. Many varieties, *rubra* is a desirable terra cotta color.

Helianthus angustifolius, 6 feet.

H. *decapetalus*, 5 feet.

H. *giganteus*, 12 feet.

H. *maximiliani*, 8 feet.

H. *orgyalis*, 10 feet.

H. *scaberrimus*, 6 feet.

All tall, rough sun flower-like plants, useful in the wild garden or shrubbery, but too weedy for the flower garden; 22 species with many varieties are in the Standard Cyclopedia.

Hibiscus militaris, Mallow, 5-7 feet, large, white flowers, purple centres.

H. *moscheutos*, marsh mallow, 5 feet, pink; grows wild in our salt marshes. It is usually through blooming by the end of September.

Kniphofia corallina.

K. *macowani*.

K. *uvaria*. Red Hot Poker. Delicate plants with grass-like leaves and red or orange flowers in spikes. Should be taken up in winter north of Philadelphia. Many varieties and hybrids. Avoid the early kinds.

Lathyrus latifolius, variety *splendens*, 10 feet, perennial Pea. Rose, magenta, white. Blooms after frost. Good vine for walls, stumps, rocks, etc.

Lespedeza formosa, Bushclover, 6 feet, rose, pea-shaped flowers.

L. *formosa*, var. *albiflora*, 6 feet, white, pea-shaped flowers in racemes.

Phlox, Phlox. Hundreds of varieties, many of them harsh colors. They bloom late but are not particularly useful in the autumn garden.

Rudbeckia laciniata, *Rudbeckia*, 7 feet. Many varieties. The type is preferable to the double Golden Glow, which should soon take its place in the past with the Crimson Rambler rose.

Salvia azurea, Blue Thyme, 5 feet. Sky blue flowers, grey foliage, likely to become weedy in good soil and should be kept in the wild garden or rock garden.

Sedum spectabile, 1 foot. Purple flowers, grey foliage. Good in garden or rock garden, because of its foliage early in the summer and the good color of its large heads of flowers in September. It is one of the few plants which has a definite solid form, and is therefore pleasing in contrast with the spiry, feathery, misty things.

Solidago rugosa, Golden Rod.

S. canadensis.

Forty-seven varieties of golden rod are listed in Britton & Brown. These two are tall, handsome plants. All are interesting.

Stokesia laevis, Stokes Aster, Dwarf 1½ feet. Blue flowers. Hardy as far north as Boston.

Tricyrtis hirta, Toad Lily, 3 feet. Lily-like flowers, purple spotted, on erect stems. Very late and often injured by frost. Needs shade.

Veronica longifolia subsessilis, Speedwell, 3 feet.

Japanese speedwell. Deep blue spikes lasting through October.

Viola cornuta, tufted Pansy, 6 inches. Blooms throughout the season but is useful in autumn.

The chrysanthemum is possibly the loveliest of all flowers and its importance in the autumn garden is great. It has a range of color lacking in the cosmos and asters and in addition a delightful fragrance. In the garden varieties may be found the same colors which we admire in those grown under glass and with flowers of a more delicate if less portly substance. A list is of little value for names are given to flowers varying the slightest in form, color or size. They are divided into several loose classes, the pompons being the hardiest and having clusters of small flowers, some single and some double. The so-called large early flowering varieties will need protection when blooming if the blooms are to reach full size and a covering of coarse litter in the winter. The single flowering varieties are later than others and consequently need more protection. Some of the large flowered

florists' varieties can be grown out of doors, but are not worth the trouble in the flower garden. It is necessary to experiment with all of them and discard those of uninteresting color or lacking the degree of hardiness which may be desirable.

If one is really interested in chrysanthemums and has no greenhouse it would certainly be worth while to arrange a cheese cloth shelter on the south of the house in which to grow the later varieties, which need considerable protection to bring their flowers to maturity.

Chrysanthemums outdoors need little care—fertilizing, applications of soot and watering is usually all that is necessary. They should be taken up, divided and replanted in the spring. Chrysanthemums can be planted between drifts of iris, back of pæonies, with oriental poppies, or in drifts throughout the garden. They need full sun and shelter from cold winds.

Japanese anemone is one of the most useful and beautiful of autumn flowers. There are many varieties—single white, double white, pink, rose. The flowers are large with a ring of yellow stamens. They grow on long stems, the handsome leaves being mostly at the base. They will endure

some shade, but need protection in winter and should be planted on a sloping bank where no water will stand to freeze.

The autumn flowers in the wild garden are, excepting golden rod and asters, fewer than in the cultivated garden, but one of them, the fringed gentian, is the loveliest flower that grows. It is said by people who should know that it can be grown from seed planted in early spring in ground that is never dry. This means not simply rich, moist soil but ground that is really wet a foot below the surface.

The annual garden may be brilliant in color in autumn for the antirrhinums, calendulas, nasturtiums, petunias, zinnias, etc. are hardy and will endure several hard frosts and still bloom. The calendula is perhaps the hardiest of all.

The garden in autumn can be improved in appearance by the use of these autumn flowers and indeed it may be as brilliant as in spring if the spring and autumn flowers are properly proportioned. It should be our ambition to have the garden looking its best at all seasons, which means good foliage and a few flowers in bloom every day from April to November. At no time under this

plan will the garden have a bare appearance and at no time will it be a blaze of glory, but it will always be delightful and will never seem to lack flowers.

If I seem to suggest in all this a garden which is full of bloom in autumn I would make a quick disclaimer, for although the garden itself, its design that is, is our chief concern, we must when it comes to the enjoyment of individual plants or flowers, use them in such a way that they can be seen as lovely details. My own tendency is to use the best of them as we might use a vase or a piece of bric-a-brac in a room, with restraint and consideration for the setting. If they are to be used as paint to color the landscape as the daisies do in June and the painted cup in May, that is a different matter. There are few occasions in a country garden when one wishes to paint the landscape of the garden all one color.

A garden is like a room and should be used and decorated in the same way, never overdone and never stripped of everything.

For a theatrical effect of color to match our glorious autumn we must depend upon planting the wild garden with quantities of autumn flowers

or have a special autumn garden where a riot of color is not only permissible but in keeping with the spirit of our season.

An autumn garden has some advantages. It provides a place for the autumn plants which are a nuisance in other gardens because they take up room that might be used to greater advantage for plants having a longer season, and it makes a favorable setting for spring flowers.

The autumn garden should have all the plants on our list. It should face south and be protected from severe north and west winds by walls, hedges, shrubbery or evergreens. The garden itself should be on a slope, with the land falling rapidly below to the south. Such a situation provides not only for good drainage of water but also air, and air drainage is essential if early frosts are to be avoided. The air as it cools settles to the low spots and if these are pockets it must stay there, but on a slope it drains away and little harm is done. If our autumn garden is at the edge of a considerable pond or lake it will be favorably situated also, for the cold air is warmed again by the water of the lake, or mists may be created and these in themselves are a protection against frost.

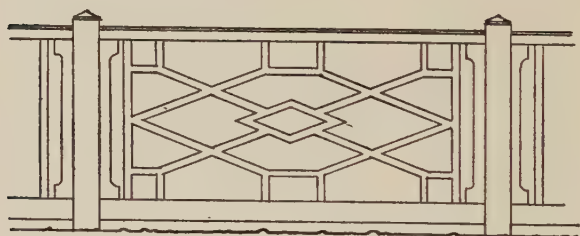
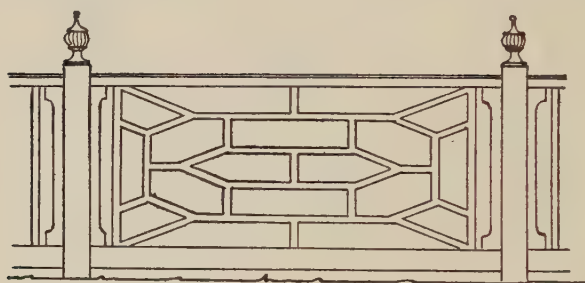
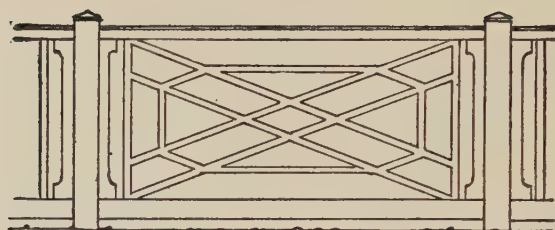
Such a garden, whether it be called wild garden, rock garden or spring-autumn garden, is an indispensable feature of a year-round place. If it is sufficiently protected from the north winds by evergreen trees and tall shrubs it will be found a comfortable place to sit and, if necessary, to work on any bright day. One may say of it with truth that it is never without flowers, for the Christmas rose *Helleborus niger* and the late pansies, following the last of the autumn flowers, should last until the Japanese witch hazel *Hamamelis japonica* or our own *Hamamelis vernalis* blooms in February. In February or March the snowdrops and winter aconite begin, soon followed by crocus and the other spring bulbs.

I find often enough that my opinions of flowers change, and as they change the garden changes too. What was one year thought charming is now regarded with indifference and on the contrary the flowers once despised may in time become favorites.

Accidents of weather have perhaps much to do with this, for the balloonflower which in a wet season seemed to have little to say, in a dry month speaks of blue and of sunny skies. In a similar

way the globe thistle, which has heretofore seemed unimportant, has had this summer a new interest. Our changing taste and more critical, but still emotional, judgment should not be disregarded but the garden should change as we change; in the richness of its expression or in the austerity of its simplifications. It should not be expected that the garden which satisfies us at thirty-five will be the same to us ten years later. If it be so it is because we have ceased to grow and have gained nothing by living.

AUTUMN WORK



CHAPTER IV

AUTUMN WORK

THE reason we are so apt to neglect garden work in autumn is not difficult to understand. How can we in September make ourselves forehanded and ready to prepare for spring when indolence tells us that autumn is not the time for work but to make up in enjoyment for all the hours wasted in labor throughout the spring and summer? The acquirement of a New England conscience seems the only hope, for autumn is the time to do spring work, and our ambition should be to do everything possible in the autumn so that there will be little left to do in the spring, when the rush is much greater.

Work in the garden can begin at any time after September 1st, with taking up and dividing plants which have become too crowded or moving to new positions plants which seem not to thrive. The foxglove seedlings which are self sown in the beds should now begin to appear and can be planted where the flowers are to bloom next year, or seed

may be sown in the cold frame and the plants put in the garden in the early spring. This practice is better as it gives an opportunity to plant something to follow the foxgloves. This must be done every season for the foxglove is a true biennial and never flowers twice, though the old plants may live on.

Early September is the best time to divide and replant any spring flower such as iris, oriental poppy, lupine, penstemon, etc. because the growth which they make after this date is important as it influences next spring's bloom. Pæonies, too, should be replanted now if it is to be done at all. The longer pæonies stay in one spot the better they are, but an occasional shifting and division may be necessary. All perennials can now be transplanted if they are nearly through blooming, but there should be a month between the transplanting and the freezing of the ground so that they can become thoroughly established. This requirement makes it inadvisable to transplant the autumn flowers such as Japanese anemone and chrysanthemum until the spring, for only the frost ends their season and it is then too late to transplant.

Every autumn some work must be done in the



CANADIAN YEW AGAINST MARBLE WALLS

garden, though an entire replanting is seldom necessary; for every year some plants will get ahead of others and have to be thinned out, or seedlings of phlox, for instance, of an undesirable color will be discovered and must be thrown away or removed to a spot where they will harmonize with their neighbors.

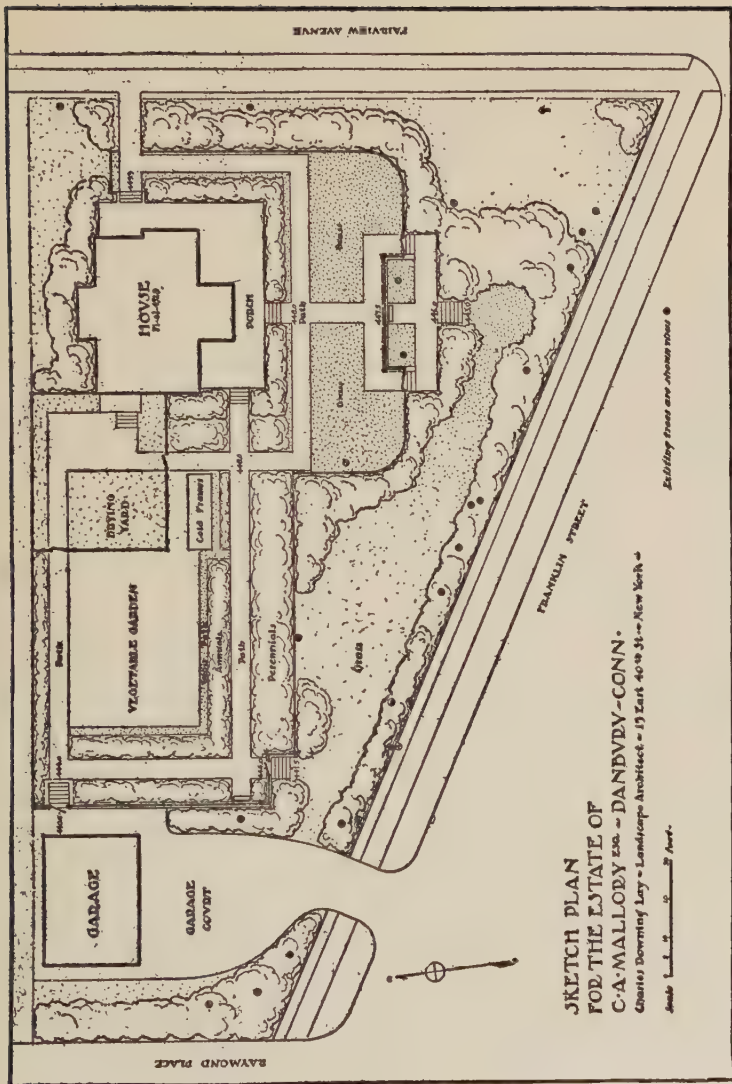
It may sometimes be necessary to replant the whole garden—it is a tremendous piece of work and needs careful planning. It is probably useless to try to let anything remain; everything should be taken up, beginning at one corner and continuing for a space. The soil can then be enriched with well-rotted manure and bone meal, or potting soil composed of rotted sods, leaf mould and manure in equal proportions, with ground bone added as seems advisable. When a space has been cleared and the soil refitted we are ready to start the new planting with the plants which were removed or with others from other parts of the garden. Proceeding thus, section by section, the work will be done as rapidly as possible, with no confusion and with no doubts as to what has been done or where things have been planted and where not. The plants which have been taken up can be piled on

the ground somewhere and will not suffer for a day or two if covered with canvas or cloths. There is no easier way to do a hard piece of work. If some plants are left in the ground while others are being planted they are sure to be injured by digging near them. Lilies can be taken out unharmed if all the plants are removed in strips.

There must, of course, be a plan showing the arrangement of planting for the whole garden. If there is not you are certain to give too much space to some things, crowding out others. If the plan shows the number of plants to go in each group as well as the space required the work will be much easier and is sure to come out right in the end.

In planting the garden it would be well to consider the comparative value of the different plants. That is, whether they give enough pleasure to pay for their care and for the space they occupy. Some plants do not and although they may have lovely flowers are altogether too unlovely when not in bloom to be maintained in the garden. Such things should be shifted to the cut flower garden or the wild garden. The flower garden is no place for them as its success depends not upon the details or the beauty of bloom of any one flower but

FAIRVIEW AVENUE



SKETCH PLAN
FOR THE ESTATE OF
C.A. MALLODY ESQ. - DANBURY - CONN.

Charles Downing Lay - Landscape Architect - 15 East 40th St. - New York -

Scale 1" = 20' feet.

Existing trees are shown thus •

A CORNER LOT IN VILLAGE SURROUNDINGS

upon upon its year round effect of beauty, and in the production of this effect luxuriant foliage is only second in importance to the design of the garden itself.

It is impossible to advise about the plan of planting, for the character of the garden and the desires of the owner must decide this but in general I believe it is better to follow Miss Jekyll's method of planting in drifts (see page 255). This is an attempt to arrange the flowers in narrow masses or drifts at an acute angle with the sides of the bed so that they will present a broad band to the observer. These drifts alternate somewhat between spring and fall plants. Thus there might be a drift of phlox, then a drift of iris, then another of phlox. When the iris is in bloom the phlox is not and the garden seems full of iris and conversely when the phlox is in bloom. Other useful associations are clump speedwell, which is late in blooming, used in front of blue wild-indigo, which is early. It is not only early and late flowers which can be used together in drifts but we can in this way get color contrasts. The scheme, I believe, is the best for a garden of perennials.

A garden of a different character where beds of

early tulips are followed by annual poppies and these in turn by marigolds requires, of course, a complete replanting with every change of flowers.

The drift method needs some skill in handling as the strong growing plants must not be allowed to crowd out the weaker ones, but on the other hand I believe it takes less work to keep it up for the plants grow close together and need usually little staking or cultivation. The general appearance should be better, too, since the plants in bloom will hide the poor foliage of those which have passed and any bare spaces will be less obvious.

Color in the flower garden is a popular subject for garden magazines, and indeed our pleasure in colors is one of the reasons for a garden. It is rare, however, to see in flowers out doors a color combination that is not in some way pleasing; for out doors all colors are reduced or harmonized by the light and in any case they are but a small portion of the general color scheme of blue sky, green foliage and sunlight. People seem to forget or fail to see the color of light but it is ever present. At noon on a sunny day it is cold, almost white, reducing the strength of all colors, or, as the painters say, making them higher in key. At other times it

may be yellow or orange or at evening red, so that trees even appear red instead of green. Warm sunlight tends to neutralize all the purples, as the reflection of the sky neutralizes the orange flowers.

The form of plants has always given me as much delight as the color of their flowers, and I like for this reason the robust clumps of showy sedum with their flat heads of flowers and the globes of sea lavender which appear miraculously from a few leaves flat on the ground. These definite forms, where all is too soft, too feathery, hold the eye delighted and give us somehow deep pleasure.

There are so many reasons for autumn planting that it is not strange that nursery men are always urging it. Trees and shrubs planted then have time before the ground is frozen to make some new roots and are ready to start growing at the first sign of spring. They will need little watering unless there is a severe drought in August. Sometimes there is a drought in autumn which makes it difficult to dig trees with a ball and necessitates constant attention to see that things just planted do not dry out before the rains come.

There are, however, a number of trees with soft, fleshy roots which do not succeed so well with

autumn planting and should always be moved in the spring; these are magnolias, tulips, Rose of Sharon and others with similar roots.

Evergreens may be safely transplanted in autumn if moved with a ball in time to allow new root growth before freezing.

Visiting a nursery is a delightful experience but we are likely, if we have any of the collector's spirit in us, to be led into extravagance of thought or of spending which we may afterwards regret.

It is so easy when we see a thrifty oak tree about six feet high to wish to have it on our own place where we can watch it grow to youthful vigor and feel that it will go on to a majestic old age sheltering our children's children meanwhile. It is not different with other trees; we covet the magnolia which we see in bloom and we think we should by all means have it for our own. But unless our place be enormous we must restrain our admiration yet awhile or be prepared for ruthless cutting in five or ten years. Giving rein to acquisitiveness in this way tends to produce a collection, an arboretum, rather than a lovely place.

To escape the pitfall of acquisitiveness, crowd-

ing everything in a jumble, and fall into that of growing only specimen trees, is almost as bad. The single well grown tree is often an inspiring object in the landscape but six to the acre is dull. The word specimen suggests the horrors of our suburban landscapes where every half acre plot has its blue spruce, red leaved maple and hydrangea.

I have in the past taken many people to nurseries, but I do so no more, for I find that they are confused like a child in a candy shop by the multiplicity of choice and are soon wearied and discouraged. Nor can I show them in the nursery what I would like to show them; that is, a tree at maturity which will give them some idea of my object in asking them to buy the tree for their own place. One gets no idea in the nursery of the quality of any tree at maturity. The nurseries are at fault in this and should have an exhibition ground or arboretum where they can show, as it were, the finished product. If we had to buy our clothes as we do trees, waiting for them to grow and fit our needs, we should be glad to go back to Eden.

In the past the nurseries have, in order to make the work pay, been forced to raise many easily

propagated, quick-growing things, which have little merit in our landscapes. They grew quantities of European trees, which here seem stimulated to a quick, vigorous growth, but are not lasting. Hence the Norway spruce which was planted in such quantity following the Civil War and in less than fifty years has shown its unsuitability to this climate. Naturally a solemn, dismal tree it is after forty years, old, ugly and unkempt looking.

European birches, European maples, have been planted by thousands, but they are inferior to our own maples and birches and do not attain in this country a beautiful old age.

Asiatic, Siberian and European shrubs have been grown or imported in enormous quantities and almost all are nothing but weeds as compared with our native shrubs. I dislike the honeysuckles and will have none of them. I can exist in perfect happiness without the forsythia, and of all the tribe of immigrants from Europe I love only the lilac, which still looks exotic in many scenes. The nurserymen, however, are improving and there are today few native trees and shrubs which one cannot buy, though many of them are still scarce and only to be had at all in small sizes.

We hear sometimes a great deal of loose talk about the joy of working in the garden, of handling the cool, moist earth, but I think this is a subterfuge and that the real reason is something else. I enjoy the work in a flower garden up to a certain indefinite point of weariness, but only because I would have it done and if possible well done. As an end it is nothing. If I had someone else to do it so much the better, but in a small garden that is difficult and in a large one it is still more difficult to have the work done just my way. It is a case of compromise, of enduring the eccentricities of another person until the irritation becomes too great, when I am compelled to fire him and do it myself. The real reason we enjoy work in the garden, it seems to me, is that we thereby gain for ourselves all the satisfaction of managing the garden and the fun of determining how and when everything shall be done. It is then more definitely ours and we go into it at twilight with a sense of ownership and accomplishment that is quite different from our feelings when we go into the gardener's garden and presume to pick a flower, or pull what we take to be a weed.

PREPARING FOR WINTER



CHAPTER V

PREPARING FOR WINTER

THANKSGIVING usually brings with it snappy weather and heavy freezes—it is time then to begin to think of preparing the garden for winter. The old flower stalks should be cut off if this has not been done and the winter cover can be gotten ready to put on. It should not be put on the beds until the ground is frozen six or eight inches deep, as the object is not to prevent freezing but to prevent the freezing and thawing on top. Any hardy plant can stand freezing, but it is likely to winter-kill if the surface of the ground thaws in the daytime, making sloppy mud, only to freeze hard again at night.

Any covering material will do for protection—marsh grass, straw, leaves, can all be used, but manure is most frequently used as it adds fertility in addition to giving protection from winter injury. The manure should not be too fresh but should be full of straw which shades the ground

and the plants and at the same time lets in the air so that the plants are not kept damp, which might cause their leaves to rot. Manure without straw might become almost as sloppy a mess as the soil itself. This light yearly dressing of manure is usually all that the garden needs. There is more in the manure than the chemical content, for it adds humus which is so necessary for the mechanical condition of the soil and bacteria which are necessary to free or prepare the chemicals for use by the plants. Because of the bacteria a light yearly dressing of manure is, we are told, more effective since it keeps the soil inoculated, than a heavy dressing every four or five years. The covering should be several inches thick, but not thick enough to smother the plants. Injury occurs in this way apparently because the covering holds too much moisture, which may cause rot.

The leaves at the crown, which in the case of many perennials stay green all winter, should be only lightly covered, as too much covering may keep the air from them.

Additional fertilizing of the garden should be done in spring, just before the blooming season, with nitrate of soda or with a mixed chemical

fertilizer. This must be applied very carefully as it is easy to give too much, which will injure the leaves of the plant.

After the covering is put on the garden it is pleasing to have a light layer of evergreen boughs laid carefully on top. These prevent the covering from blowing away, make the garden look neater, and give a better hold to the drifting snow, which is the perfect covering for all plants in winter. Low hedges or evergreen boughs stuck in the ground also serve to catch the snow and hold the covering.

A garden in which bedding plants are largely used, or annual beds in any garden are made presentable in winter by this covering of evergreen boughs. The boughs should be hemlock or spruce and must be carefully laid to simulate as nearly as possible natural growth like that of Canadian yew or other spreading shrub.

For rhododendrons or other acid soil plants which must have a dressing of leaves, the evergreen boughs on top make a perfect arrangement.

The rose garden must have a thorough preparation for the winter. The teas and hybrid teas should be bent down till they are almost flat on the

ground and covered with six or eight inches of soil. Hardier roses should be hilled up with earth about a foot high. Then the whole rose bed can be covered with coarse strawy manure. Putting overcoats of straw on the roses takes much time and is not so effective as this earth covering. The roses are pruned in the spring almost to the point where they were covered so that it is no harm if some of the branches should be winter killed.

Protection from the bitter cold and drying north or west wind is often desirable and this can be secured by burlap nailed on stakes, by cornstalks tied to rails, or even by board fences. Windbreaks of this sort are often made too high as it is seldom necessary to protect more than the lower half of the shrub or tree. Large box bushes or evergreen trees should, however, be protected to the top. Evergreens which have been recently moved are sometimes wrapped in burlap to the top to prevent too rapid evaporation from their leaves. It is possible to give too much protection to this sort, and I have frequently seen box bushes come from their winter cover quite brown, while on an adjoining place they have been perfectly green without any protection. In general, protection which holds

moisture, prevents perfect ventilation, or keeps the plant too warm, should be avoided. Covering which permits saturation with moisture with no chance to dry out rapidly before freezing up at night is likely to be the cause of greater injury than the plants would receive if left unprotected.

Protection is not only done in a way to cause injury, but is often kept up too long. For the first two winters after planting it is desirable, but after that trees and shrubs should be left to endure the winter as best they may, for if they are not hardy it is better to find it out and let them die.

There is, I think, no greater mistake than to attempt to grow plants which are too tender for the climate. It is not always possible to tell what will be hardy and what will not, and it is worth while to make experiments, which should last a year or two. After that if the plants seem unhappy the attempt to grow them should be abandoned, and hardier if less lovely things be used in their place.

The winter of 1917-18 killed the saucer magnolia about half way back on the branches. It recovered at once and after five years shows no sign of injury.

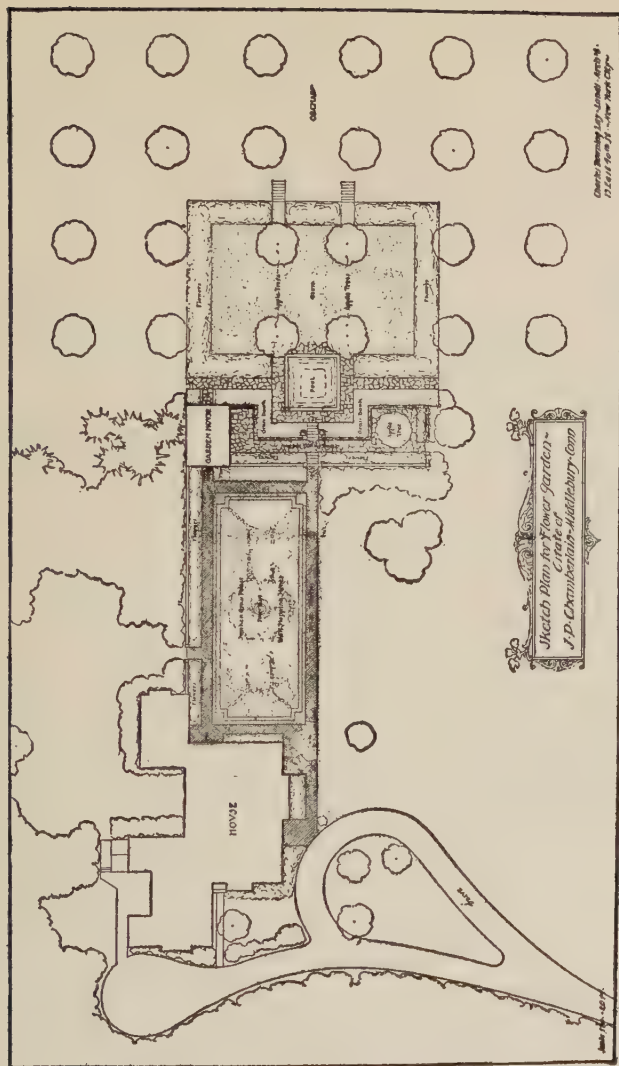
There are plants like box and California privet which winter kill once in five or ten or more years

at the northern limit of their range. They should not for this reason be wholly abandoned for strong roots soon make good the injury to the tops.

There is not, however, so much reason for continuing to use the California privet as there is for the box, as there are several hardy privets which can be used; among others Amur privet and Ibota privet. Whether the Japanese box will be a perfect substitute for our dwarf box we are not yet able to determine.

Explorations in China and investigations here are gradually giving us plants for the northern states which are hardier than those we have commonly grown. There is found, too, a difference in the hardiness of certain native trees from different localities. The sweet gum and the pecan are both southern trees with a range to the latitude of New York City, and if they are brought from the south they are not hardy in New England, but propagated from seed collected at the northern limit of their natural range they can be grown much farther north.

In China has been found the original peach (*Persica davidi*), which is much hardier than our cultivated peach and used as a stock on which to



THE GARDEN IN THE ORCHARD, HIGHFIELD

graft will extend the range of the peach. Similarly many plants which have been brought from Japan and proved tender have forms in China which are much hardier.

As the leaves fall from the trees they must be raked up, and they should all be saved; some of them to rot in a pile until the sourness is gone, when they can be used in potting soil, and some to add before the sourness is gone to the covering on the rhododendrons and other ericaceous plants. A heavy covering is put on these plants every autumn for two reasons; first, to keep the ground from freezing too deeply, which might mean winter injury to the rhododendrons, and, second, to keep the soil acid, a condition essential to the thriftiness of the plants. It is astonishing what apparently hard conditions of soil the rhododendron will sometimes endure. They are often seen planted in the lawn as specimens without the protection of other plants, and left through the winter without covering. Although they may live and bloom under these conditions, their life is not a happy one, as may be seen by their thin foliage and their tightly curled leaves. In cold weather the rhododendron

always curls its leaves; probably this is due to the freezing but it has the effect of reducing the area of leaf exposed to the wind, and hence the evaporation of moisture, which always goes on to some extent. Evaporation from the leaves means that the plant must supply the loss by taking up moisture from the ground, or the leaves turn brown and die. It is, therefore, advisable to give a sufficient covering of dry leaves to keep the ground from freezing, making it easier for the roots to get moisture. The dry leaves can be put on the rhododendrons almost to the top of the plant and will gradually settle with the weight of snow. They should not be taken off in the spring, however much the gardener wishes to have bare ground to work (more work!) as that might mean the reduction of the acidity of the soil.

Winter protection with manure is often given to young fruit trees and shrubs, and it is no doubt a benefit to the tree to be slightly protected from freezing and thawing of the ground about it, and the manure adds fertility. This must be done with consideration of the field mice and rabbits. After one experience in losing thirty small flowering apples by field mice, working in the warm manure and gnawing all the bark off from near the top line

of the manure to a foot or more below ground, I always recommend that the protection be kept a foot away from the tree. The mice are then unprotected above ground and find the ground itself frozen and so are able to do little damage.

The injury done by rabbits is always above ground and usually above the snow line, as it seems they only take to a diet of fruit tree bark when other things are covered. Mice, on the other hand, work below the snow line and below ground. A sleeve or cylinder of heavy tarred paper, wire netting, or a coat of tree tanglefoot is not hard to put on and will prevent all possibility of injury. It should, of course, be high enough to keep the rabbits from working above the snow. Wild trees or shrubs are seldom injured by mice or rabbits. They seem to prefer apple trees, but possibly they do some slight injury to other trees where there are no apples.

One winter, a few years ago, there was a late heavy snow which drifted badly. When the snow was gone the poison ivy along the fences was found stripped of its bark and many maples were girdled. In a nursery the lower branches of Austrian pines were stripped.



ESPALIER APPLES AS AN EDGING

Protection as such is never necessary for the vegetable garden in winter, but it may be covered with manure or with some cover crop to keep the soil from washing and to add humus and fertility. In this undertaking we must consult the agricultural experts.

The rock garden should have some litter thinly spread over it to prevent washing away of the soil and the heaving of small plants, but care must be used not to get the covering too thick as rock plants are easily smothered. The nicest covering of all is pine needles, which quickly get near the soil, protecting it sufficiently, but leaving the plants exposed to the sun and air.

In a formal garden other things than plants must sometimes be protected: statuary, vases, seats and other objects if of soft stone or porous terra cotta which absorbs water and then freezes and cracks or disintegrates, must be covered with a watertight box or put indoors. Bronze or a hard American marble is better in this climate. It is not worth while to have a garden full of ugly boxes for six or seven months in the year just to protect some delicate stone. The formal garden should be as pleasing as possible in winter and if it is proper-

ly placed so as to be seen from the windows of the house it should, even when snow covered, be a source of pleasure.

A good garden, too, has that subtile but fundamental quality of space composition; that is, space converted into visual impression, which should be as vivid at one season as another. Do not destroy this effect by the introduction of disorder and ugliness in winter, but keep the garden as if it were to be used and enjoyed even if you never go outside the house.

Water in the garden may present some difficulties in winter. If it is truly running water and does not have to be pumped it should be allowed to run the year round, for water which is running rapidly or which comes warm from the ground cannot freeze enough to do any harm. Pools in which the water only runs occasionally will, of course, freeze, and anywhere south of New York this will do no harm.

I have always found that the pool left full of water and on which a foot or so of ice formed came through the winter without injury, whereas the pools which were emptied were badly cracked.

Knowing since school days of the enormous pressure exerted by water when it crystallizes, this seemed a paradox but the explanation is simple. The empty pool has its sides pushed in by the freezing ground outside and it is not built to stand such a strain. If it is full of water and freezes the pressure on the outside is equalized, and the ice rises above the former water level in hummocks and no harm is done. The water should, however, be lowered so that the ice will have no hold under the coping to exert a lifting force, for this would surely loosen the coping. In any case it will be safer to have the water level lower in winter than in summer.

If there are hardy water lilies in tubs in the pool they are better off in the water and under the ice than any other way. In fact, it is almost impossible otherwise to keep them through the winter in good condition. Tender water lilies can be taken out in their tubs and kept in a cool greenhouse or warm cellar but they must be kept from growing and they must be always covered with water. Gold fish in a pool do not suffer if there is solid ice over them for weeks.

There may be some reason which makes it neces-

sary to empty the pool in winter, and if this is done it can be filled with leaves, which is probably better than a board covering, but unless the ground outside the pool is also kept from freezing some damage is likely to be done. The shape of the pool has much to do with the way it comes through the winter. A circular pool is the best shape to resist pressure from without, while a narrow rectangular pool is the worst. The long sides of the latter are almost certain to be pushed inward enough to crack the walls by the freezing of the ground outside.

There is an ancient custom of wrapping the stems of newly planted trees with burlap or straw to prevent drying of the bark and injury by the sun. It is frequently done particularly with large trees which have a thin bark like apples, lindens and maples. The results have always been satisfactory but whether the tree would have died without the covering of its bark or whether the covering influenced its growth in the slightest degree it is impossible to determine. Trees with a rugged corky bark seem less in need of treatment.

What to do with plants in tubs is always a difficult question. A dark, cool cellar which is frost proof is the best place for bay trees, box bushes,

hydrangeas and other plants, but it is rare in these days of steam heat to find such a cellar. If the cellar is cool but dry these things can be kept there if they are frequently watered. Bay trees and box must not freeze, must not grow, and must be ventilated, conditions which make their handling so difficult that a special plant cellar where the need as to temperature, light and air can be controlled, is frequently built.

Hydrangeas and other deciduous leaved shrubs can be kept in a cold pit or cold frame or in the cellar, but even these rugged plants will need some care in airing toward spring lest they damp off. A better way is to take them out of the pots and plant them in some sheltered spot where they can be well covered with leaves or litter. They are easily repotted in spring.

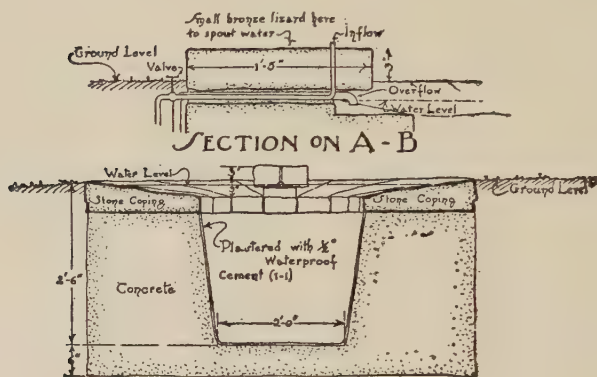
The ground being finally frozen solid or covered with snow, we can begin, with the help of catalogs, preparing for spring; determining to the best of our ability what changes must be made in the garden to satisfy our new longings for the expression of an emotion of beauty in the garden. It is, if carried through, the most important work of the year, for the success of the garden depends

upon correcting the features which were not so pleasing last year and upon developing in ourselves new reasons for dissatisfaction next year.

In this the study of books, of the garden itself in its simpler winter dress, and the attempt to bring to light our own delicate reactions to it are important, for in the end the garden is made or ruined by the person who has its care throughout the year.

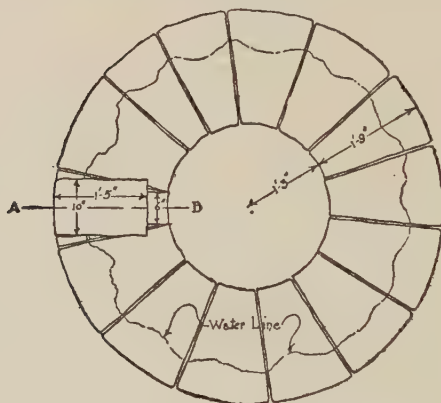
SPRING BULBS

DETAILS FOR BIRD BATH & SMALL POOL



SECTION ON A - B

SECTION



PLAN

CHAPTER VI

SPRING BULBS

ONE of the happiest occupations of autumn is planting spring bulbs. It is work that combines a keen sense of gratification with our own forehandedness, and a joyful expectancy of delights to come.

The harvest festival, which is a thanksgiving to our mother earth for her bountiful provision for the winter, should soon be followed by the sacrifice to her of part of our harvest. We make this sacrifice, however, in perfect faith, knowing that with the coming of spring these bulbs will have a glorious resurrection.

Sometimes it seems as if we were sowing dragon's teeth, which will arise like soldiers in their brave array. But they are soldiers of light and loveliness, unless perchance we have purchased a packet of mixed colors! Then indeed they will fight like Cadmus's men, brother killing brother.

But if the work of planting bulbs be full of sentiment, it is also full of backaches, for kneeling on the ground and planting a thousand or so bulbs in little holes made with a dibber or trowel is not easy. To save one's back, however, by planting fewer bulbs will probably result in a more pleasing effect when they bloom. I think bulbs are always planted in too great quantities. They should be thinly scattered in the woods or on the lawn, and we should get over the idea of mass planting. This is part of our general vulgarity and our wish to do everything wholesale and is only a little removed from the motives which lead our notorious spenders to extravagance. One narcissus by a mossy stone may be more pleasing than a score, and such restraint is not an indication of æsthetic preciousness but of genuine taste and thorough enjoyment.

It is, I admit, too easy to buy bulbs. Fifty cost sometimes only twice as much as ten and five hundred may be less than five times the price of a hundred. The variety is so entrancing, too, that we are likely to get too many kinds. The certainty of their bloom, their cheapness, the comparative ease of planting and the little care they require



TULIP AND WISTERIA IN THE BOX GARDEN

afterwards also leads us into extravagance. And yet we stick too closely to tulips and hyacinths and make few experiments with the less known narcissi, bulbous iris, and others.

Tulips, perhaps better than any other flower, lend themselves to formal bedding in geometrical designs. They are of even height, come into bloom at the same time, and show no foliage when in bloom, so that we get an unbroken mass of fine color. There is great variety in the color and many of the tones are subtile and delicate. They have their place in almost any garden and spring would not be the same without them. I believe they could be planted in a more engaging way than is usually done. In a flower garden one can plant them in drifts among the fall blooming flowers or in spare spaces between groups, because they ripen and die before most plants have attained their growth. Some will be sacrificed to the hoe if they are planted this way, but it is better so than to have them planted in stiff masses. One or two bulbs in many different places will produce a better effect in the garden than many in one place, but the planting will require more taste and skill. It might be possible to produce a wonderful effect by planting

tulips further apart than is usual and using the different colors as the pointillist painter uses his dabs of paint.

The rock garden, the shrubbery, the brookside, and the woods all offer inviting places for planting spring bulbs, but they should be scattered as they might grow, one or two here and there, and in another place perhaps a dozen or twenty well spread out.

In England they have a way of planting bulbs, as it seems, by the acre through open woods. Such prodigality is impossible here aside from the fact that our woods have naturally more undergrowth, but still we often overdo the "naturalizing" trick, which mostly produces the opposite of a natural effect.

The May flowering tulips far surpass the early tulips in size of flowers, height of stalk and beauty of form. Their range of color, too, is greater and runs through deep violets almost to black. Most of them are too expensive to be used for bedding, and indeed their beauty would be lost in a mass. They are most distinguished in appearance when growing alone, when the lovely flower can be seen solitary at the top of the long slim stem.

When planting tulips in beds, it is easiest to dig out the whole bed to the proper depth for planting, arrange all the bulbs, and then cover all together. They should be planted two to two-and-one-half times the depth of the bulb in good soil. When planting a few at a time in scattered places the work must be done with a trowel if the bulbs are large, but if they be small a dibber will make a hole large enough. On the whole, a trowel is best as the dibber may make a hole too deep in which the bulb is suspended half way down (turned a little perhaps) or is left on a hard lump of earth. Digging a hole with a trowel and pressing the bulb into the soft earth, right side up, is the best way.

Bulbs to Plant in Autumn

Allium: The garlies are interesting plants because of their variety of color. *A. moly*, the golden garlic, is the best known. *A. azureum* is a charming blue and there are among the twenty-four varieties listed in one catalog many shades of blue, rose, white, purple, violet and yellow. The flowers, like all onions, are in a ball-like cluster on a wiry stem. They should be

planted in a sunny position and they seem to do well in the rock garden among low spring things such as rock cress, cerasium, or alyssum, as they bloom later than these plants and their foliage lasts but a short time after the flowers fade. They need little care and under ordinary conditions persist and even increase.

Anemone: Our wild anemones are well known and easy to grow in moist, shady places. The European anemones (such as *A. pulsatilla*, *A. nemorosa*, etc.) are more difficult and require special care as to soil, moisture and protection.

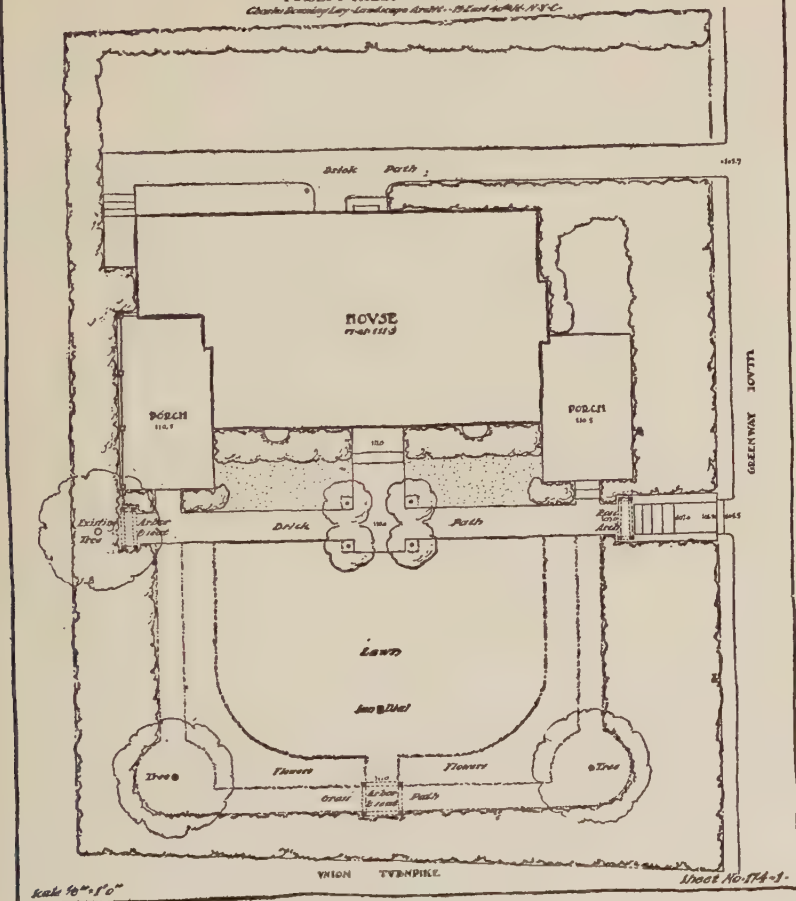
Bulbicodium: Purple, earlier than crocus.

Calochortus: Mariposa lilies. These Western American bulbs are little known in the east, where they need particular care and protection through the winter. The enthusiast will probably not be content until he has tried them, as they are very lovely in flower and have a long season.

Chionodoxa: Glory of the Snow. One of the earliest to bloom, usually with the scilla.

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A SUBURBAN GARDEN

The flowers are blue, white, reddish, and pink.

Colchicum autumnale: Autumn crocus. Can be planted with spring plants, as they have no foliage when in bloom.

Convallaria majalis: Lily of the Valley. Is perhaps the easiest plant to grow. It can be used in the shade of a house, under trees or shrubs, and becomes naturalized in broad masses.

Crocus: There are sixteen species and thirty-seven varieties. One of the earliest bulbs. Most useful when planted in the grass or at the border of a shrubbery, where it should be given the appearance of accidental sowing. It is difficult to plant this way, because one naturally plants systematically in even rows and spaces, but it can be done. *Crocus* is not lasting but is cheap, so that it can be replanted every year.

Dicentra spectabilis: Bleeding heart.

D. *cucullaria*: Dutchmans breeches.

D. *canadensis*: Squirrel corn. Charming plants with lovely flowers and foliage

delicately palmate and silvery green.
They are best planted in autumn.

Dodecatheon: Shooting star. White, lilac, rose, purple. Many varieties. Charming and little known flowers. It has lasted for many years in my own garden but finally succumbed to shading.

Eranthus hyemalis: Winter aconite. Earliest of all except snow drops. Very persistent and can be used under the shade of trees. A delicate yellow flower just above a deep green leaf.

Erythronium: Troutlily. Delightful where they grow wild. Many varieties, all easy to grow.

Eremurus: Desertcandle. White, blooms for a month. Expensive but striking.

E. robustus: Flowers rosy, 8 feet high.

Fritillaria: Fritillary. Handsome flowers for spring garden or edge of shrubbery.

Galanthus: Snowdrops. The first flower to bloom.

Helleborus: Christmas rose. Not easy to grow but possible and perhaps worth the trouble.

Hyacinthus orientalis: The common hyacinths. Not permanent here and associated in our

minds with the worst type of city gardening.

- Iris: I. xiphioides. English Iris. Beautiful flowers in white, yellow, blue. Not permanent but should be planted.
- I. I. xiphium. Spanish Iris. Like the English but more delicate.
- I. Dutch: A race of hybrids which blooms before the Spanish Iris. They are lovely flowers.
- I. histrioides: Harput Iris.
- I. reticulata: Netted Iris. Both charming and bloom in February and March.
- I. susiana: Mourning Iris. Curious chocolate color, but lovely in form.
- I. cristata: A creeping native iris growing on thin soil as in a rock garden. A lovely pale blue flower.
- I. hexagona: Japanese roof Iris.
- I. pumila: A dwarf, early iris in several colors.
- I. graminea: Has the odor of a ripe peach.
- Leucojum vernum: Snowflake.
- Mertensia virginica: Virginia bluebells. A charm-

ing plant with nodding corymbs which are pink before opening and turn blue.

Muscaria botryoides: Grape hyacinth.

Narcissus: The loveliest of spring flowers. A great variety of color, form and time of bloom. Persistent and always lovely.

Varieties: There are many varieties, which vary in price from one cent apiece to four or five dollars apiece. The commoner varieties may be planted in masses for their golden color, but the better ones should be put where they will appear to best advantage when in bloom and not be lost in a mass.

Polygonatum: Solomon seal.

Puschkinia: Like a crocus.

Sanguinaria canadensis: Blood root. Not a bulb but to be treated so. Later than snow drops and lovelier.

Scilla: Squills.

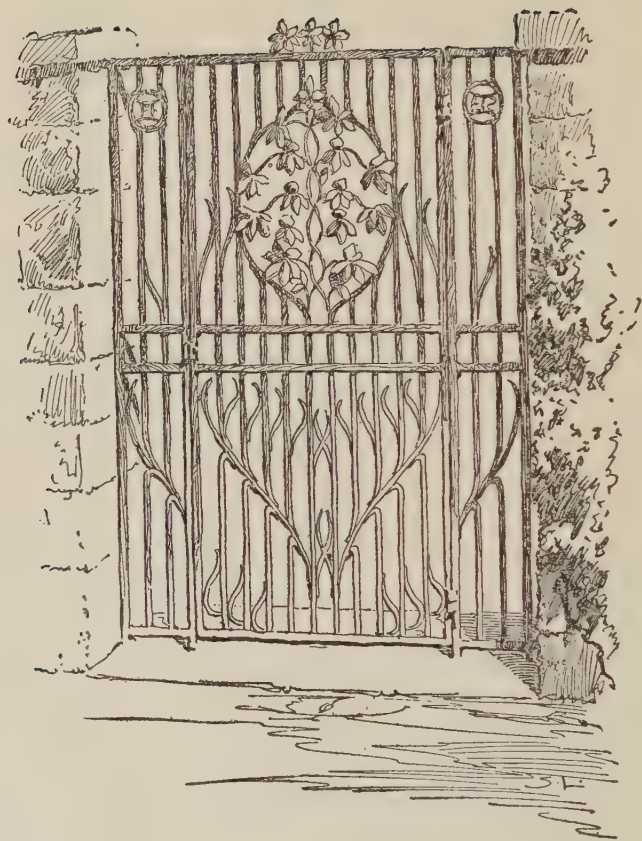
Sternbergia: Fall daffodil. Interesting perhaps, but not to be compared to the daffodil, and insignificant beside the glory of our autumn flowers.

Trillium: Trillium. Many varieties.

Tulip: Parrot, 9 varieties Preferable for the
 Darwin, 141 “ garden to the single
 Rembrandt, 12 “ early tulips, which
 Breeder, 39 “ are used in bedding
 Cottage, 86 “ and are not per-
 manent. They are
 as compared with
 these of little value
 in the garden.

Species: *T. clusiana* The tulip species
 T. greigi are easy to grow
 T. kaufmanniana and often lasting.
 T. oculis-solis They have charms
 T. praecox unknown in many
 T. sprengeri of the hybrids, but
 T. sylvestris they are most suit-
 T. tubergeniana able for the special-
 ist.

TERRACES, ROCK GARDENS,
MARITIME GARDENS



CHAPTER VII

TERRACES, ROCK GARDENS, MARITIME GARDENS

THE modern preoccupation with health and adoration of nature, both of which have greatly increased in my memory, are responsible for our living out of doors more than formerly. The architects have helped in getting rid of the piazza which, without giving sufficient in return, darkened the rooms inside. It has been replaced by the square porch or loggia joined to the house in such a way that it has little effect on the light in the rooms. Pleasant as the loggia or porch may be, there are times when we prefer to sit under a tree or arbor with our feet on the cool ground, and in summer evenings we prefer the terrace, where there is nothing over our heads to hide the stars.

The terrace is the outdoor living room of the place, and will be used at all times of day and night in summer and on any sunny day throughout the year. It must be large enough, therefore, to give shelter from the north or west winds, as well as to

have shade in some parts in summer, and to be fully exposed to the sweep of south-west winds on hot afternoons. It should be suitably furnished with weather proof chairs, tables and benches, so that it will not have to be stripped of everything when a storm threatens. It should be paved with brick or stone, so that it will be clean and dry for the feet and warm in winter sunshine.

There is nothing which gives such an air of being completely furnished to a garden or terrace as a quantity of blooming plants and trees in pots. They are in themselves pleasing and their distribution about the garden or terrace adds much to its charm.

The following list of plants to be grown in pots or tubs for the decoration of the terrace or garden, is not complete, for any plant which can be grown in pots will be useful for decorating the terrace.

Tender trees or shrubs which must be suitably housed in winter:

- Bay trees
- Hibiscus
- Oleander
- Orange or lemon
- Crepe Myrtle

Hardy or half hardy shrubs which, however, cannot be left in pots through the winter, unless protected from frost. It is better to plant the hardy ones out in a sheltered spot:

Azaleas in many varieties

Hydrangeas

Rhododendron

Tender summer blooming bulbs:

Amaryllis

Agapanthus

Begonia

Annuals suitable for use in pots:

Cineraria

Geranium

Lobelia erinus

Nasturtium

Petunia

Strawberries, of the fall-bearing varieties, grown in special jars with holes on their sides in which the plants are set, are good to look at and bear some fruit which is amusing to pick. They should bloom and bear from August 1st or earlier to late October.

Picturesqueness in the shape and character of a potted plant is often more pleasing than severe

formality, for it is the fact of being in a pot or tub, formally placed, which makes it part of the scheme, not the type of the plant itself.

I would not care to have a century plant except in a desert and a rubber plant in this climate is only endurable in a city back yard. Palms, of course, can be used in some places but they seem as much trouble as orange trees and are not so agreeable to look at. The orange is one of the best things for a pot, because it has an appearance of maturity when quite small. There is seldom any doubt about it; it is a tree no matter what the size, while some other things when young have none of the characteristics of a tree but appear to be no different from an annual plant.

The hydrangea has always given me much pleasure as a pot plant. It wilts when in full sun and must be watched and watered, but it recovers quickly and seems to suffer no harm. There are many varieties with white, purplish, mauve, blue or pink flowers, which last for several weeks. I enjoy the solid, big flowers with their changing colors. The foliage, too, is excellent. After several years growth they need large pots or boxes. Terra cotta, glazed or unglazed, is the most orna-

mental thing because of its color, but wooden tubs are easier to handle. Every few years the hydrangea plants can be cut into several pieces, so that the stock is always increasing.

A pool on the terrace is another delight. The water with the reflections and its movement is always fascinating, and water plants seeking the light from the deep dark of the pool and blossoming in fragrance and purity have a strange charm of their own. Lily pads in themselves are interesting in their growth and in their movement in the wind. The water lilies with pink flowers have reddish leaves which are larger than our native lily pads. A drop of water on a lotus leaf is like a jewel. In rain or in the spray of the fountain the lotus leaves are dry, for water does not wet their glaucous surface, no matter how fast the drops fall.

A pool is always delightful in a drought. It is one place that has not suffered and that will not.

The inhabitants of the pool, though not warm or friendly to man, have still a degree of reliability which makes them seem like acquaintances. The gold fish are always there, always doing the same things like all idle people, and the bull frogs can

always be found somewhere sunning themselves or seeking the shade of a leaf or a stone. They will respond quickly to an offer of an angle worm. Occasionally in the day they sing, but certainly in the night they will be heard several times.

Mosquitoes disappear from the pool when the gold fish are put in. No one need be deterred from having a pool by the fear of mosquitoes.

Running water, or I should say wasting water, is a luxury beyond most people, but I dream of a place which will have a considerable brook or an inexhaustible spring so that the water can be run from one channel to another and from pool to pool.

A terrace of native stone, set on six inches or so of sand, soon becomes a kind of garden, for many things seed themselves between the stones. It is a favorite place for Johnny-jump-ups and other charming weeds. I have planted on such a terrace *Potentilla tridentata*, small ferns, bearberry, sedums, *Iris pumila*. Many rock plants and low ground covers can be grown if one is willing to give them a little care. If they get too big or are in the way they can be pulled out or cut off quite easily. Sedums are a little soft for such a situation and a little vulgar, but more delicate things seem to gain

in charm because of their setting against a quiet background. It would not be impossible to make a paved terrace serve as a rock garden also.

Rock gardens, like terraces, are useful and interesting throughout the year. They have, moreover, an additional attraction in the rocks, which, because of their organized but natural and irregular forms, are always leading the eye to new movements and the imagination to new paths. Rocks themselves are often delightful in color, full of streaks and markings and are besides clothed in lovely mosses and lichens. They are, because of their more definite but more varied form, a grateful contrast to the soft delicacy of foliage. The rocks must always be the most important thing in a rock garden. The flowers are more alluring when we see them on the rocks, which they must never be permitted to hide.

It is not easy to make a good rock garden, for some piling up of stones to form pockets where earth can be placed is usually necessary and these artificial constructions must not be conspicuous. The amount of earth required is usually less than we think; an inch or two will do for sedums and if

the rock is seamy many things will grow vigorously in the seams without other sign of earth.

The ideal rock garden would be one where a ledge runs along a stream or little brook with a narrow strip of ground between. If there are woods shading part of the ledge and if some of it be in full sun the conditions are ideal, for we can then grow all the plants of the woods as well as those which need full sun. Such a rock garden would be sure to become in parts an ericacious garden and a place might well be found for bog plants.

If we lack such ideal conditions and are yet tempted to have a rock garden or a place in which we can grow the charming and delicate rock plants, we must make an effort to have some approach to naturalism in the arrangement of our rocks and planting or else abandon naturalism entirely and have, what seems paradoxical, a formal rock garden. This could be done in several ways, but best, I think, by surrounding the space with a rather high stone wall and paving the walks. The beds in which the rock plants grow should be raised above the walks to give drainage. They should be formally arranged and the planting done in an orderly or symmetrical way.



THE TERRACE IN EARLY SPRING

If the rock garden can be made to look wholly natural all is well, but if there be a suggestion of artificiality or labor, it is all wrong and should be completely formalized. In any situation the gardening must be in keeping with the character of the rock. It will be different on the trap of the Palisades from what it will be on the limestone of Vermont.

There is no need in planting the rock garden, of using the ordinary plants of the flower garden; our only excuse for the formal rock garden is that we wish to grow flowers which will not grow well or show their charming characters well in the flower garden. Planting real rocks, of course, is done to increase the beauty of the rocks and to give to the whole scene an air of completeness and perfection, as if nature were here unhampered by restrictions and free to give her sweetest smile.

It should not be forgotten that the sunny rock garden in this climate is a spring garden and after the end of June begins to look seedy and has after that only the prickly pear, about July 4th, and a few pinks.

The flowers which I have found endure drought and persist without great care are the following:

Allium moly, Lily Leek
Alyssum saxatile, Goldentuft
Aquilegia canadensis, American Colum-
bine
Arabis albida, Wallcress
Dianthus, in variety, Pink, Carnation
Iberis tenoreana, Tenore Candytuft
Opuntia, Prickly pear
Phlox subulata, Moss Phlox
Saxifraga virginensis, Virginia Saxi-
frage
Sedum, in variety, Stonecrop
Sempervivum, in variety, Houseleek
Statice armeria, Common Thrift

Where there is six or eight inches of soil we can grow:

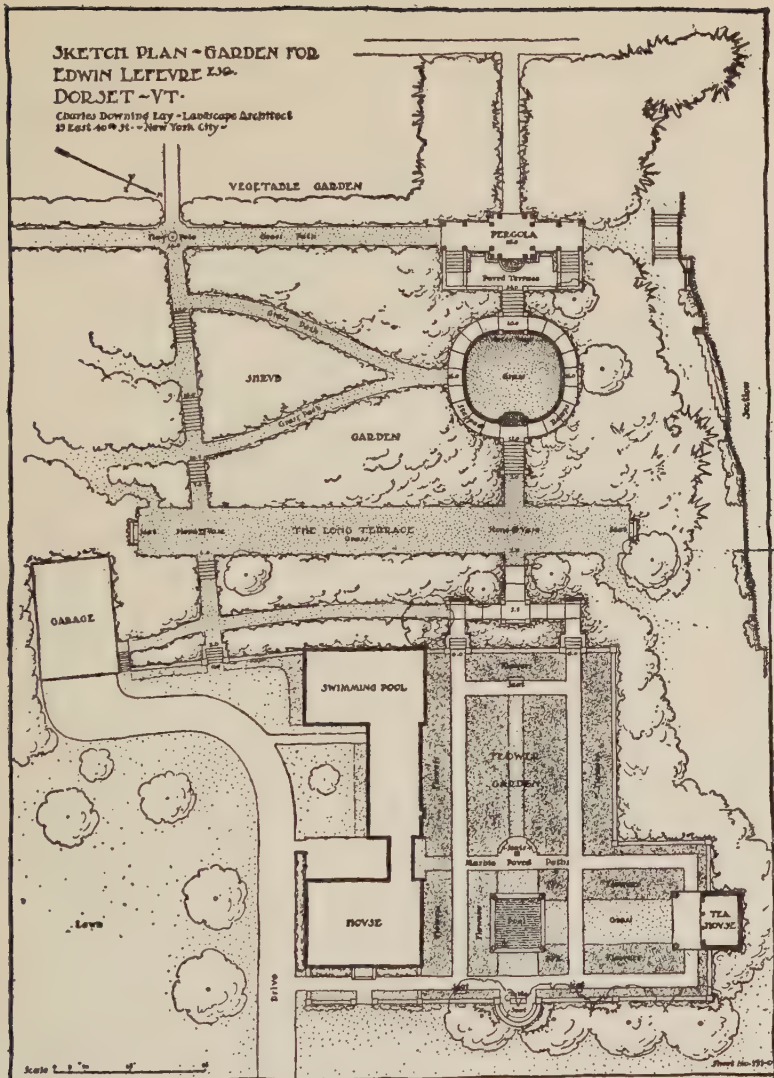
Helianthemum chamaecistus, Common
Sunrose
Geranium sanguineum, Bloodred Cranes-
bill
Many wild asters and other flowers of the
fields.

With a little more soil and the possibility of watering in a severe drought we can grow:

Artemesia, Wormwood

**SKETCH PLAN - GARDEN FOR
EDWIN LEFEVRE ESQ.
DORSET - VT.**

Charles Downing Lay - Landscape Architect
29 East 40th St. - New York City



FLAT AND HILLSIDE IN THE MARBLE COUNTRY

Aubrietia deltoides, Common Aubrietia
Daphne cneorum, Rose Daphne
Gypsophila repens, Creeping Gypsophila
Pachistima canbyi, Canby Pachistima
Thymus, Thyme
Veronica incana, Woolly Speedwell
“ ruprestris, Rock Speedwell
Wild roses

Yuccas will grow in a crevice in the rock and their large flower stalks are bold and handsome but the plant itself never looks right on our rocks.

The mulleins will endure hard conditions and our wild mullein is a noble plant, but of the others I care only for *Verbascum phoeniceum* with purple flowers.

The real alpine plants of this country and of Europe require definite conditions of atmosphere, temperature and moisture and are only attempted in other places by the wildest of enthusiasts.

It might be wise to divide the rock garden into two portions, one with alkaline soil for the plants which grow naturally on limestone, and the other with an acid soil which will suit our native alpinists.

If we have oak trees on the place and put the leaves in a pile to rot every year we shall soon have

a large pile of leaf mold, which, with the addition of sand, is said to be the right soil for blueberries, or any other plants of the heather family.

Rock gardening has been fashionable of late and it is a fascinating occupation, but those who have no rocks should not be despondent for there are other kinds of gardening just as delightful. The water garden or garden of Nymphaeas, the bog garden, and the swamp all offer limitless opportunities to indulge our horticultural or scientific interest while attempting to express at the same time our conception of a beautiful emotion.

To me the most delightful type of gardening next to the rock garden is the maritime or sand garden. This kind of gardening is possible all along our coast from Nahant to Florida. It requires for its success the same restraint that other specialized gardening does. We must accept the conditions as they are, and play up to them. The sand dunes must be enhanced, not changed. They have great charm of a peculiar kind and serve well as a background for plants which can be established on them in great variety.

For trees in our maritime garden we can use:

Pitch pine

Jack pine

White spruce

Cedar

Ailanthus

Hackberry

Wild Cherry

Scarlet maple (in sheltered spots)

Holly

For shrubs:

Bay

Wild roses

Beach plum

Scrub oak

Sumach

Probably many other plums will grow in sand, but they have not often been tried.

Russian olive, is a useful plant in sand.

For lower foliage there is the beach grass, bearberry and many little plants like the worm-woods.

We can with care and in a few years change a barren sand spit to a lovely grove with a pine needle carpet and many delightful shrubs and flowers, but to build a house in such a spot requires much thought to prevent the sand from blowing away and to protect the new plants from damage. It might be wise for the first few years to make people walk on raised platforms above the sand.

AUTUMN COLOR; TREES



CHAPTER VIII

AUTUMN COLOR; TREES

ALTHOUGH many of us have inherited the pioneer's scorn of the things which grow wild, we are fast overcoming this and have almost reached the point of veneration for wild things, just because they are wild. This is the result of the propaganda for the preservation of wild life, animal, vegetable or mineral. Much of our veneration seems lip service, for in the suburbs any touch of wildness is looked upon as disorderly neglect and painful neatness is the ideal.

Although we must go to some wilderness for all of our plant material, we still have contempt for the plants of the roadside, and often speculate on the possibility of our garden plants being somewhere pestiferous weeds. We are beginning to learn that our native plants grow better and look better in our landscape than any others, and we are fortunate in having a country rich in deciduous flowering shrubs and trees. Still we plant too few

natives, but use instead exotic shrubs and Japanese evergreens which are poorly adapted to the climate. Who knows the sumach in its many varieties and its entrancing beauties at different seasons?

Though we may disregard the charm of wild plants entirely at other seasons, we have been taught to admire their gorgeous color when the leaves are ripening in autumn.

The spring flowers of Italy and the cherries blossoms of Japan are no more worthy of admiration than our autumnal foliage, which in time I feel sure will be as famous. Even now it is an object of pilgrimages (by motor). What effect will it have on our common character, this dying in a blaze of glory, making the bravest show at the last?

Many Asiatic plants color brilliantly, but those of Europe turn brown and the leaves fall without any flame of passion at the end. The Siberian blood in cultivated apples and pears is surely indicated by their flush of color in the autumn. I remember our Virginia creeper in England and what a thrill its scarlet gave me.

One charm of our autumn color is its uncertainty. We never know when the leaves will begin to turn or how brilliant they will be or how long they

will last. I am inclined to think that the brightest and most prolonged effects come after a season of sufficient moisture, for this is the condition which insures good growth and complete ripening. A dry season, I suspect, is followed by a quicker ripening, which may be almost a drying up and gives a less brilliant show of color.

I have never heard of a garden or shrubbery being planted solely for its color in autumn, but I imagine that it would be thrilling, because the colors change from day to day and are so fleeting that one can never be sure which is the most astonishing moment.

The Asiatic trees and shrubs which turn in autumn seem to be scarlet like the barberries, the winged euonymus and enkianthus. The deeper wine colors which are common in some of our shrubs are only seen in the Japanese viburnum, and that is somewhat dull in color. Our native viburnums are fascinating in autumn with their purple or magenta shades. None are handsomer than the maple-leaved viburnum which, while still green, seems overlaid with a scarlet glaze—at the end it becomes pale claret color. The autumn festival lasts for many weeks but is ended by the

scarlet oak, the last to turn color and the most enduring.

The appearance of being bathed in golden sunlight which yellow leaves produce is the most enchanting of all the aspects of autumn. On a dark and stormy day a sugar maple in yellow and orange outside the window makes one think the sun is shining. It is bright sunlight when the maple is by in storm.

The pepperidge tree in the swamps is the earliest to turn color, and often before the end of September it is waving its red flag to warn of approaching frosts. It is possibly the purest, deepest red of all our trees.

The scarlet maple is the next tree to turn and it is wonderfully striking. It grows in any soil but seems to turn earlier in a swamp. The sugar maple is possibly the most important tree in the landscape because it has been planted so much and in parts of the country it is protected for its sap. Its commonness is a happy circumstance, for there is no tree more beautiful in autumn. It begins by turning slightly yellow, then becomes purer yellow and may finally redden to a light scarlet.

To speak of the beauty of trees in winter will, I suppose, suggest evergreens. But it is the beauty of deciduous trees, too often disregarded by country dwellers, that really gives us the keenest pleasure in winter. The winter landscape is no less beautiful than that of summer and if it were associated with our pleasures in the same way it might seem more lovely.

If we consider the winter landscape as beginning when the oaks turn in color and ending when their buds burst in spring, it has greater variety from day to day and occasionally greater contrasts in a single day than summer has. Its beauties are indeed more delicate in mid-winter and I think make a stronger appeal to the imagination.

To understand what these winter beauties mean one should live in a hill country, not forested, but with pastures half way up their sides and woods at the top. The contrast between the yellow or golden brown pastures and the purple grey trees when seen in mass nearby and the bluish tones of the distance is enchanting. A sprinkling of pine or hemlock among hardwood trees such as maple, birch and oak, will produce the most surprising results in strong contrasts and at the same time in

delicate gradations. Nothing is lovelier than the soft haze of purple branches of the birch seen against pine trees, and the white trunks of the birch add much to the effect.

It is well to divide the deciduous trees roughly into two classes—large trees for forest or lawn and small trees for the garden. Of the large trees we have plenty, but at present we seem to lack small trees which can be counted on to grow a single trunk seven or eight feet high and above that a head seven to ten feet more in height or even less. Such a tree would be invaluable, for it gives shade where we want it and it would not obscure the view from the upper windows of the house. A tree of this kind would be useful in the garden also, and for the same reason. Small trees are needed in the cities also, for a large tree cuts off too much light. We can with much labor produce a tree of this kind by pruning, as they do in Europe, where the oriental plane, the linden and probably the Norway maple are often kept low and square; but it will be better if we can learn to use some of our native small trees in this way without the necessity of much pruning. There are many places where

we wish to plant a tree which will stay small and never get more than twenty to thirty feet high, yet have all the charm and character of a tree; as for example in the garden or on a small place in the suburbs.

The trees which suggest this possibility are the shadblow, which grows in New England to a height of twenty-five or more feet with a trunk perhaps ten inches in diameter. This is a large small tree but it is charming in every aspect. It has grey bark with dark streaks and starry white blossoms which come before the leaves cover it with a lacey veil.

The redbud is a small tree with handsome round leaves. The flowers appear close to the bare stems and are a lovely pink. It covers the hills in parts of Pennsylvania and will grow further north. It is good for the garden bed or for the terrace.

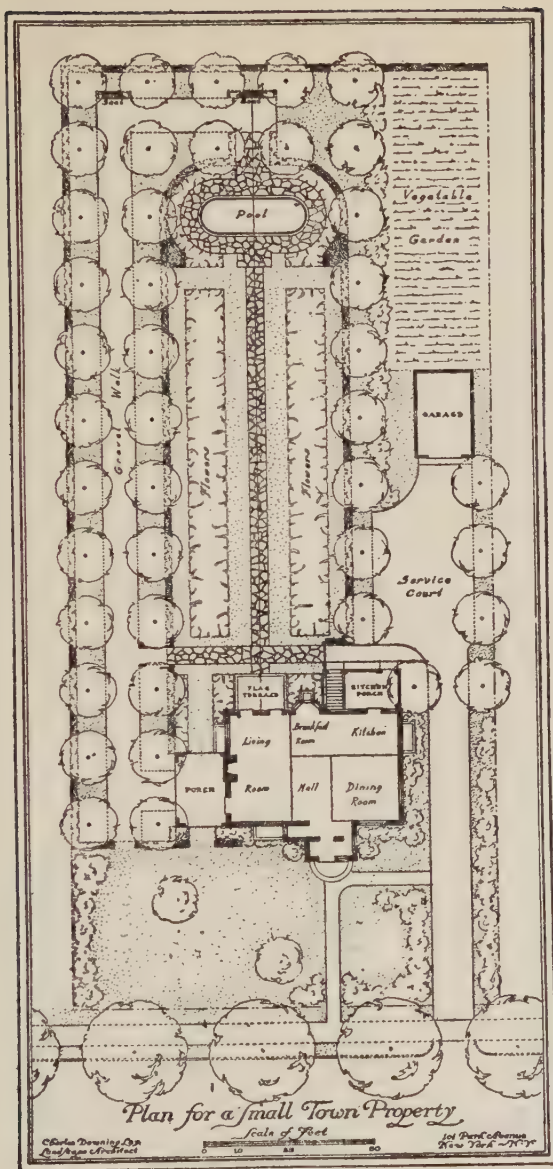
Stewartia is a possibility for formal use in garden or terrace. It makes in ten years a rather tall pyramid and is remarkable for its large white flowers in July. The foliage is abundant but seems to be yellowed or browned in August near Long Island Sound. It may not be perfectly happy outside of its native Appalachian forest.

Ironwood is a small tree, ideal in shape as it grows in New England pastures. It has handsome smooth bark and a good twiggy head.

Dogwood is in its range a most promising subject, and I have reason to believe it can be clipped to form a pleached alley or flat topped arbor.

There are few trees more varied in their charm than the hawthornes and few more useful in the landscape. The flowers, which follow those of the apple trees and come after the leaves, are white and attractive. The fruit on some ripens in August and is an orange scarlet. On other varieties it ripens later and hangs on through the winter. The foliage of all is good, but it is in the rugged picturesque branching of the tree and its small size that we find its greatest attraction. There are said to be varieties which grow only six to ten feet high, which would be of great value in a garden or a small place. All hawthornes are now difficult to get in nurseries, but will some day, when their value is better known, be plentiful. In winter I enjoy the dense twiggyness of their branches, their grey trunks and general air of rugged vitality.

Sourwood is a small tree of the heather family.



SHADY WALKS AND A YEAR ROUND GARDEN

It does not grow fast and it is somewhat pyramidal in shape, making a standard of fifteen to eighteen feet in ten years or so. The blossoms are like the lily-of-the-valley, a raceme of white flowers, and like the andromeda these are perfectly formed in September for next spring. The twigs are red and there is an air of elegance about the whole tree.

Mountain ash is known in many varieties, but none seem better than our own, which grows to a height of twenty-five feet and has an ovoid top. The foliage is good and the scarlet berries are a great ornament.

There are besides a number of shrubs which can be used as small trees. Blackhaw is one of the best of these, as it seems to grow naturally in standard form, and the nannyberry is another, perhaps a little larger.

Panicle hydrangea, the parent of the terrible hydrangea "Peegee" of the suburbs, is a handsome small tree of good color, pleasing habit and thrifty growth.

The cornelian cherry, and its near relative the Japanese cornelian-cherry, are both good small trees.

Styrax can be made into a standard with a seven-foot trunk and is a charming specimen.

The small magnolias are suitable for use in formal positions.

The tree lilac, *Syringa japonica* is another which grows to twenty-five or thirty feet. Undoubtedly there are many more like the Osage-orange, the flowering apples and some of the *Prunus* family which could be used as small trees for shade or in the formal garden for decoration, but they have not been tried in this way. We should make many experiments and discover which trees are best for these formal uses.

There are many gardens which seem, because of their size or surroundings or the way in which they are planted, too flat and hence are uninteresting or even offensively dull. Leaving out of consideration other deficiencies of design, they seem to need height in the planting which gives scale and a sense of space. This, I think, can often be accomplished by planting large shrubs or small trees, which, hiding some of the scene, divide the remainder into comprehensible portions. Gardens without tall trees or shrubs, besides being so sunny that no comfort is to be had in them until late

afternoon, have the defects of the panoramic view which is always dull and must be cut into definite portions by large objects in the foreground, if they are to be made pleasing. We must, I think, plant more large shrubs and small trees in our gardens.

It is one of the faults of the unlimited vista that it concentrates the eye on one spot, which seems to restrict the perception of space and is always tiresome. If there be on the other hand a large object in the middle distance and we can see past it on both sides and see the sky above, we seem to have the maximum space impression and a view which is never tiresome. A large object in the middle distance because of its strong color and form seems to push back the far distance and makes it bluer than we thought. Hence the reason for having a building or a tree quite close to us in any view.

The grey birch, in winter when it is seen from a distance growing in old pastures, closely massed and of an even height, changes in color from pink to grey and purple. Few trees occur so often in such pure stands, so that their color in mass can be appreciated. Its expression is wholly of delicacy

and grace; it has often the added charm of an irregular picturesque shape, caused, we may guess, by bending too low under the weight of ice in winter. The canoe birch is of equal beauty but is a nobler tree because of its size and its more vigorous branches.

The oaks are pleasing in color and in mass and because their leaves sometimes hang through the winter they give strength to the color of the hill-sides. Individually they have wonderful beauty of grey and furrowed or smooth black bark, a rugged system of branches, and, except in the pin oak, which is more delicate, a strong twiggy surface taking the place of the leafy covering of summer.

All except the pin oak are difficult to plant and must be moved when three or four feet high or even less, but they are worth the trouble. They are often objected to as being slow growing, but I think when well started they grow as fast as most trees. A black oak and a maple standing side by side and of equal age have in thirty years attained about the same height and spread.

The post oak, which is common on Long Island, is much like the white oak and as difficult to move,

but the attempt to grow it should always be made even if one must resort to planting an acorn.

The white oak, which is valuable for its timber, is a noble tree and like the post oak lovely in winter because of its rugged branches and light grey bark. The oaks appear to me to have a certain appropriateness in certain soils, and this should be considered when planting them. The pin oak never looks so well as in a low marshy place and the chestnut oak seems to suggest rocky ledges. But such restrictions must not be carried too far.

The scrub oak, which is quite dwarf, being hardly more than a shrub, has great merits. Its shining dark green leaves, tough branches and picturesqueness makes it desirable in many places but it seems almost impossible to transplant. I have been able to buy two year old seedlings which are only three or four inches high, yet have a root three or four feet long, so that it is necessary to make a hole with a crowbar in order to plant them. These have grown well but cannot afterwards be moved.

The sugar maple in winter is hereabouts the same chunky, globular mass that it is in summer. In Southern New England and further south it does not seem to have the majesty of the tall



AN OPEN DECEMBER

columnar stem with picturesque branching at the top, which we see further north in the hills. Though it has been planted everywhere and is often a useful street tree, I think the red maple would serve our purposes better.

We are accustomed to hearing the praise of the American elm, and it is indeed magnificent. Its delicate mist of blossoms mark a period in the progress of the spring no less surely than the more brilliant flowers of the red maple. An elm never looks so well, I think, as on our river plains, which seem to be its favorite habitat. The English elm is a tree of a different character, but equally useful. It is more upright in its growth, more rugged and it lacks the gracefully drooping branches which give the American elm such an air of yielding softness. In cities the English elm seems to be more enduring than our tree.

The beech is one of our noblest trees. It reaches large size, has perfect foliage, and few trees are so handsome in winter. The European beech is similar, though the bark seems a shade darker and the winter leaves are a strong brown instead of the pale warm grey of the leaves of our beech.

No tree in our territory ever reaches the size of

some specimens of buttonwood. There are few trees more attractive. It is a pity that a fungus which attacks the leaves and makes them turn brown and drop in midsummer has prejudiced people against it. Its charm in winter is due to its vigorous branching. Its bark, white where the old bark is newly fallen, and warm brown in other places, giving a piebald effect, seems so thin that it shows the limbs beneath with all their delicate modelling. It must apparently have water for it grows naturally in river bottoms where it is flooded in a freshet, and the finest one I have ever seen was beside a spring house where it had water all the time.

The pepperidge is a charming and useful tree but it is difficult to move and like the sassafras should be grown from seed or supplied by the nurseryman in pots. Its shape is a broad cylinder but rugged and picturesque when old. The branching is thick, irregular, rather drooping and light grey in color. The leaves are shining, dark green and turn brilliant scarlet and crimson. The fruits are enjoyed by birds, particularly flickers. It seems to prefer a swampy place, but will grow anywhere. It has a stronger expression of character

than many of our trees and charms the eye by its variety of form and the movement expressed in its masses.

Although the northern range of the liquidambar is the Connecticut shore, it can be grown farther north. It is a tree of many charms; a conical shape when young, fragrant, shiny leaves, corky bark, brilliant autumn color and great size and ruggedness when old. There is no better shade tree.

Apple trees in age are picturesque and often pleasing in their wide flung branching, but in youth they are never nice except when in flower. At all times they have an exotic look when associated with our native trees. They do not, unless they have the blood of the Siberian crab, turn color in autumn. They are to be planted rarely as part of a landscape composition, though they have their place in a rural scene. An orchard with its trees in rows running over a hillside is an attractive thing, and the trees in fruit with their suggestion of autumnal abundance are full of satisfaction for many desires.

Orchard cultivation often destroys the picturesqueness of the tree. Seedlings in old pastures are much more attractive to the painter.

Applewood is nearly perfect for the open fire and many old trees will give more pleasure so used than if they are allowed to stand.

Wild cherry is a graceful tree with shiny leaves, white blossoms and black fruit ripening in August. It is seldom planted for ornament, yet it has some value in this way and should be found on every place which has room for a grove or wood. It has a loose open head and hence does not give an impression of solid form. Near the sea it does fairly well and it will endure much buffetting of winds. Its leaves in autumn turn bright yellow.

Sassafras is one of our handsome trees. It has a leafy full head and a cylindrical form which when it becomes old gets broken up and, therefore, more picturesque. It is one of the first trees to bloom and its starry yellow blossoms give pleasure in the spring landscape. I believe it can be used in rows and would be a good tree for a shaded walk. Although the tree reaches a considerable age and has sometimes a trunk three or four feet in diameter, it does not in the open grow tall, so that an avenue could easily be kept within bounds. It is difficult to move and should be grown in pots or from seed. Its autumn color is yellow with touches of crimson.

The black walnut is in some of its aspects our noblest tree. It grows to great size and its straight columnar trunk and simple branching are always pleasing. Its leaves are carried high and are not thick, so that it bears light shade which is not oppressive near the house. It seems to share this characteristic with many of our American trees which have loose open heads with few leaves except on the tips of the branches. The dense leafy heads of the European lindens, maples and horsechestnuts have few counterparts among our native trees. It is often desirable to have this dense shade and to feel that the tree is a solid object in the landscape.

The horsechestnut is a noble, useless tree, unequalled in majestic form and rich fullness of leafage. It requires for its best development a deep soil and it suffers in cities and in dry places.

The European lindens are like the horsechestnut in their full compact heads, which seem more important in the landscape than our trees with their loose tops which appear as a delicate tracery against the sky. The black locust, the yellow locust, many of the oaks and the birches let too

much light through, and are not, therefore, so pleasing standing alone, but appear to best advantage in rather large groups or in a thinly planted wood.

The Japanese katsura tree, which has a delicate spray and blows in the wind like a birch, has nevertheless a full solid appearance. Our best trees for density of foliage are the maples, beeches, lindens. The cucumber magnolia is fair and the poplar also.

In planting trees we often have a sentimental obsession and give each tree room to grow, show its character and become a sample of that tree at its best. This is often inimical to the composition of the scene and we should realize that we can if we wish, and should often, plant trees quite close together, in groups, in avenues and in pairs. For an avenue of elms which is to appear completely arched we can plant trees twenty feet apart or less. Fifty feet is often too far. In other situations we can plant them as close as six feet, if they are in a single row.

The yellowwood is the personification of cultivated grace and loveliness. Its smooth limbs are

without the ruggedness of the beech; this and its flowers and delicate leaves seem to have made it the perfect lawn tree. I have never seen it wild in the forest, but I imagine it must be distorted and unhappy and never at home except when on exhibition on the lawn, for it has no characteristics to fit it for a struggle for supremacy with other trees.

There is some danger of planting too great a variety of trees, and the temptation to do so is greater if we are thinking most of the winter landscape, because in winter the divergence and contrasts are less than in summer. An assortment of trees which in summer would be restless and unlovely would in winter become a delightfully varied mass.

The poplars are objects of much contempt for their messy ways and coarseness, but there is nothing which takes the place of a Lombardy poplar, and the Carolina poplar is often a tree of great force in the landscape. There are fashions in trees as in everything, and we shall be able to distinguish the country place of the early century by its blue spruces as we do the place of 1870 by the Norway spruces.

The Larch, which was once fashionable, is entirely out of style and is seldom found, yet it has a strong character and considerable charm.

Evergreens

It is true that our landscape needs more evergreen foliage in winter, and this is rapidly being brought about by many enthusiastic planters. Evergreen planting can easily be overdone, however, particularly with spruces and firs, which are of such a uniform shape that they may become tiresome. They suggest a special type of landscape like Maine or Colorado and seldom look wholly at ease in a calmer scene. This may be felt sometimes more in the way they are planted than in the trees themselves, and this faulty manner of planting comes from a too keen appreciation of their neat beauty, which makes one wish to keep them as specimens. Evergreens are happiest when grown together in masses and so planted appear to best advantage in the landscape. So far as possible we should plant only the evergreens which are native to the district, whether they be pines, hemlocks, spruces or firs, because they will always look more

at home and on the whole are more valuable trees in their climate than the exotic conifers we are so often tempted to plant.

The promiscuous planting of specimen evergreens is always stupid but we do enjoy their color in winter, and in general our landscape would be pleasanter if it were more varied with large masses of evergreen trees. Planted in masses the evergreens seem to give a solidity and richness to the winter landscapes, but even in these large plantings the mass should be broken with oaks, birches, beeches, and if at the edges a number of trees seem to escape from the confinement of the mass, become as it were stragglers from the army, the effect will be more pleasing. The color, too, will be helped by variety in the evergreens, as well as by the introduction of deciduous trees.

The handsomest tree for the Northeastern states is the white pine, which has so many admirable qualities besides its good color, picturesque branching and rapid growth. It is attacked by many insects, and the foresters are now recommending other pines for forest planting, chiefly the red pine and the Austrian pine. The red pine is not so

good in color as the white pine, but it is better than the Austrian, which is so dark that it appears black.

The pitch pine should be planted on every place where it is likely to succeed, because of its color in winter, which is a brighter, yellower green than other pines and cheering to the spirits.

All the pines have a pleasant fragrance, a delightful carpet of needles under them, and are besides excellent windbreaks.

Next to the white pine the hemlock is our best evergreen. It is a good color, graceful in youth and ruggedly picturesque in age. The carpet of hemlock needles is not so pleasing as that of pine needles. The hemlock must have the protection of other trees when young. Planted alone it is blown by the wind and its needles whipped off. It is not a tree which inspires admiration like the white pine, but it is agreeable enough in the landscape.

When attempting to start a hemlock grove on a bare hillside, we should plant a year ahead a great many shrubs, which will protect the young hemlocks. As the hemlock endures shade well it will be all right to use large shrubs or even small trees

like the grey birch. When the hemlocks begin to grow the trees and shrubs will soon be shaded and will die and can be cleaned out.

The spruces are stiff, unlovely trees which seem unhappy in our smooth landscape. They suggest a more rugged country of sharp mountain peaks with rocky escarpments and pinnacles.

The Norway spruce is often recommended for forest planting, but it is a sad tree with few qualities that are pleasing. The white spruce and the oriental spruce are much better.

Architects often wish for a tree to take the place of the Italian cypress, and many attempts have been made to use the red cedar, but it is a poor substitute. The cedar is not so large, it has thin foliage and it turns brown in winter, whereas the cypress is thick in foliage, more upright in its growth and a good bright green.

The cedar is intolerant of shade. It must have full sun or it becomes thin in foliage and full of dead patches.

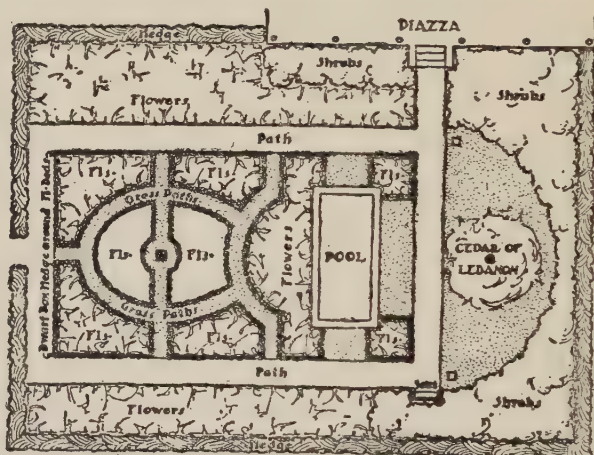
The cedar grows readily from seed and springs up by thousands in all our pastures. Often it has a striking effect in the landscape when its myriad peaks are seen against the sky, and singly, stand-

ing by a boulder with bay and roses clustered at its feet, it makes a good composition. It is more useful in such a place than in a formal or symmetrical location.

It is most picturesque and interesting when it grows in some crevice of the rocks on a wind-swept shore.

WORK IN THE TREES

SKETCH PLAN FOR FLOWER GARDEN - ESTATE OF
MRS J. B. SWANN - MADSNALL - VIRGINIA -
Charles Downing Lay - Landscape Architect - 501 Park Ave. N.Y.



N.B. Three Japanese Stone Lanterns in garden are indicated thus ~ □

Scale $\frac{1}{8}$ in. = 1 ft.

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CHAPTER IX

WORK IN THE TREES

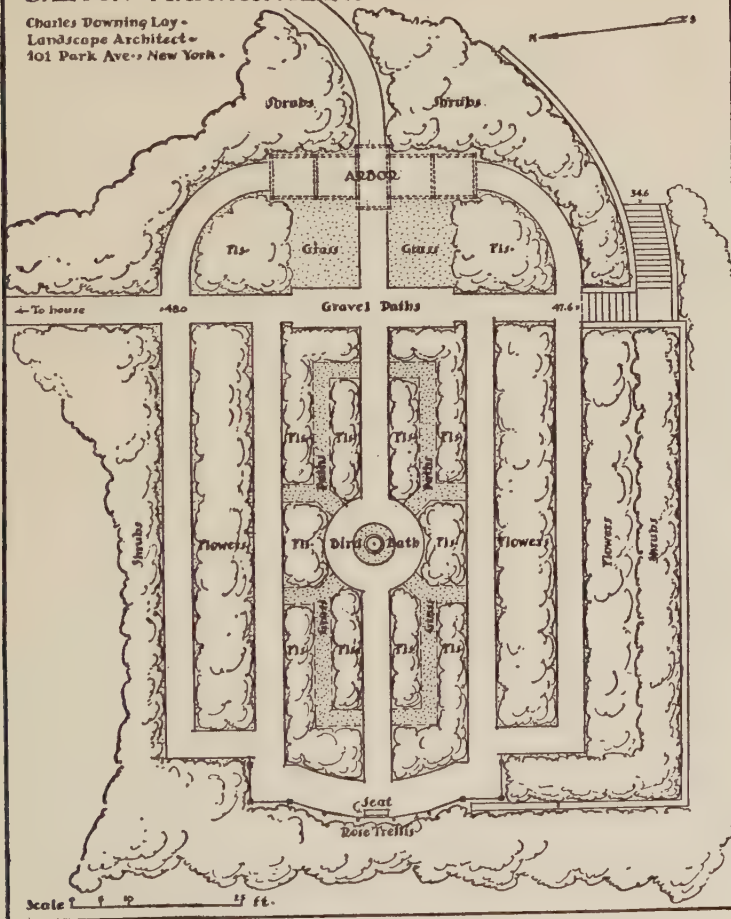
WHEN the last leaf has been blown from the trees by November winds and the swirling snow begins to cover the ground, we look at the trees with a new interest and with greater appreciation of their beautiful skeletons. The tree which has been all summer a dense, solid object (however full of life its surface may have been) becomes at once a visible mechanism like a bridge, or the framework of a building, in which the resolution of forces may be quickly apprehended. We begin to see the details of its structure, to see its graceful strength and yet realize its weaknesses. Its weaknesses will perhaps be noticed first by the good husbandman, for if not corrected they may mean the sudden loss, or at best the not distant death of the tree. Strength is the whole story with trees for, barring newly imported insects and diseases, if the tree is strong enough to stand and its food supply does not fail, it should go on forever. Each

year there is an entirely new tree built as an outer case on the old one, and in this new tree is all there is of life. Truly trees are the symbols of eternal youth.

Much can be done nowadays with trees as with children to correct the faults of early growth or the injury caused by improper training. Either fault or injury, because of the tree's annual increase in size, is the basis of further eccentricity unless it be corrected. Usually the earliest fault to be developed is a forked trunk, which is caused by the death or cutting back of the leader in trees which have opposite leaves, and less frequently in trees with alternate leaves. The terminal bud being gone two buds at the side begin to grow, forming two leaders of equal strength. There can never be a growth to join these leaders, since the living tissues are always separated by dead bark. No matter how large they become, or how grown together they appear, they remain separate down to the point where the two buds started. This division is a serious injury, for water begins to work in and the original trunk is likely to split below the point of joining because of strains which the growth of the trees has not been able to pro-

FLOWER GARDEN - ESTATE OF MRS Z-M-CRANE DALTON - MASSACHUSETTS

Charles Downing Lay -
Landscape Architect -
101 Park Ave. - New York -



A GARDEN SOMEWHAT AWAY FROM THE HOUSE

vide against by joining the tissues in a wide knee or buttress.

Forked trunks are much more common in trees which have been planted than they are in wild trees. One can be reasonably sure that any tree with a forked trunk eight to twelve feet above the ground is due to improper pruning when the tree was planted.

Chains or bands should never be put around these two limbs, for they will finally kill the tree or at least create another weak spot as the tree grows. They should be joined by heavy bolts, one at the point of present juncture and one considerably above. Unless the person who attempts this work is very expert it will be difficult to bore the holes in line so that a single bolt can go through both holes. If the bolt is made in four sections linked together like a chain it will be easy to put them in from the inside. If it is preferred two bolts each long enough to go through the wood can be joined by a chain of any sort that seems likely to stand the strain, which is only in one direction, that is, pulling apart. Such treatment will probably prolong the life of the tree many years, but it will always be in danger. More trees probably

are lost because of double leaders than from any other cause. It is probably better, therefore, not to cut out the leader when planting a tree but to trim the side branches to reduce the number of buds.

Do not let your farm hands or gardeners go into the trees unless they are experienced in such work, and unless your employer's liability insurance covers accidents which may happen while pruning. It requires skill and intelligence to handle long extension ladders and climbing takes strength and coolness. The story of the man sawing off the limb on which he sits is no joke—I've seen it attempted. Furthermore, much injury can be done by unskillful men sawing at the wrong place or sawing so that a long splint is taken off below the cut when the limb falls, or by letting a heavy limb fall on those below it instead of lowering it down with block and tackle.

It is important to look over the young trees every autumn to be sure that they are growing as they should. If a double leader is found one of them should be cut off while it is small and the wound will heal quickly. Branches which are interfering, or which seem likely to be in the

future, should be taken out. Beyond this gentle training there is no pruning to be done to most ornamental trees. They are better left alone to develop as they will. Dead branches should be removed, for if they are left to rot the rot will continue into the wood of the tree. Stumps of branches should be sawed off close to the main stem so that as the tree increases in size the wood will grow over the cut stub, not surround it, as we so often see in oak trees, with a ring of wood standing out from the main stem.

After doing what we can to prevent a forked leader from splitting we are likely to go further and do minor tree surgery, as it is wrongly called. It must not be forgotten that the living part of the tree is often only an eighth of an inch outward and half an inch inward from the cambium layer or the point where bark and wood join. Any work done inside of that is carpentry—no more, though the tree doctors may attempt to call it surgery or speak of filling cavities as if they were in teeth.

The arboriculturalists have improved much in their methods in the past few years, and now do serious and useful work, though I think they still do too much work and try to save trees which are

past saving. I have seen many trees filled so full of concrete and so plastered with tar that they have lost all beauty. The temptation is strong to call them *lignum-concrete* structures.

If a tree has real historic or sentimental interest it may be worth much to save it, but the abuse of trees has been so great in the past and their state is often so hopeless now that they might better be cut at once and new trees planted to take their place, if they cannot be allowed to go into decrepitude unbothered.

I have seen many trees ruined by ignorant pruning; not only have they been killed by the severity of the treatment but their appearance has been spoiled even if they should live.

An old tree may have much picturesque beauty with its dead branches, the deep holes where old stubs have rotted away, and its air of ruin. It is a relic of former days. I would not myself have them go but would leave them to delight the birds and for the painters who admire their picturesqueness. The same tree cleaned up and pruned, the holes carefully cemented, is likely to look ridiculous; like an old and bent man turned dandy.

Filling holes in the trunks may be worth doing,

if they are not too large; covering with tin is useless as the bark will not grow over it, but a solid filling of concrete, properly joined to the sides of the opening will in time be covered. Better than either for a small hole would be a carefully fitted board. Any patch must be further back in the tree than the bark so that as the bark grows it will spread over the patch and not tend to force the patch out or be crowded outward itself.

The object of pruning is to increase leaf surface, which is better done by cutting back the branches than by thinning them out. Cutting back a branch by one-third sends the sap allotted to that branch into fewer buds, which consequently grow larger; larger in leaf area than the greater number of buds would produce on the unpruned branch. This increased leaf area means increased power and opportunity to elaborate sap and hence greater vitality.

It is a safe rule to head back an old tree one-third the length of each branch. Sometimes more must be done. The cutting must be done with care and intelligence and it can be done so that one would never know the tree had been pruned. The tree will look a little stiffer, there is no doubt of

that, because it will lose the slender tips of its branches, but the increase in its vigor will make up for its loss in grace. The cut should always be made in a crotch, that is cut the main branch above a side branch, which then becomes in a way the leader. Next the side branch should be pruned in the same way and soon the whole branch will have a more natural appearance, diminishing in size to the tip. If it is not done this way but is cut off anywhere, leaving a stub, the result will be horrid, because the stub will die back to the next lateral branch or a bunchy lot of shoots will start to grow from adventitious buds at the end. For a season or two a pruned tree may look stubby anyway; this depends somewhat on the kind of tree but more upon the skill of the one who prunes it. Each cut should be as close as possible to a side branch, no matter how large the cut, as a cut near a branch will soon be covered by the growth of new wood from the edges. The bare wood of the cut should be painted with coal tar to keep out fungi.

Scraping the old bark off is no benefit to the trees, except as it may dislodge insects, and it gives the tree a naked appearance and a changed color which lasts for several years.

Each year the work of the year before must be followed up. Thinning must be done if the new twigs are too thick and the whole work must be kept under observation to insure its temporary success. There is no finality about a tree. It is going either forward or backward and in either case needs yearly attention.

Prof. Sargent's careful pruning saved the Washington Elm in Cambridge for many years and doubtless lengthened the life of the Waverly Oaks. They are the best examples I know of the rejuvenescence of old trees.

Pruning a new orchard has a serious financial side. The object in commercial orchards is to keep the trees headed low so that spraying and picking may be done at the least cost. An old orchard which must be picked with twenty or twenty-five foot ladders, all the fruit at the top, and which is correspondingly difficult to spray, is not worth having as a business proposition.

The technique of pruning orchards need not be gone into here, since it is a complicated subject thoroughly expounded in many treatises.

Cultivation should go hand in hand with pruning. Do not expect the heading back to be all suffi-



BEECH, RHODODENDRON AND HEMLOCK

cient but feed the tree better at the roots. This may be done by applications of manure, ground bone, ashes, lime, or nitrate of soda applied in small quantities, or new soil may be put around the tree. It all depends upon the tree whether it is advisable to dig up the sod and actually cultivate the earth about the roots. Trees which have their roots near the surface like the beech, the maples and the conifers, would, of course, be injured by cultivation. An old orchard should in most cases be left alone, because if it has not been ploughed for many years the roots will be near the surface. A little heading in may be done and a little thinning, but if it is very old it would pay better to plant a new orchard for fruit and keep the old one for its picturesque beauty.

What would an old orchard be if there were no holes for bluebirds, woodpeckers and highholes to nest in? And no high branches to rock the orioles in their bassinettes?

Winter or spring is the time to go over the espalier trees to train their long stems in the way they should grow, and cut the fruiting spurs back, leaving but one or two buds. Espalier trees against a wall do poorly in this country. They do not need

the wall for protection and it is a detriment in summer because of the intense heat, but as an edging around the vegetable garden beds they do excellently.

Before attempting to prune fruit trees one should make sure of knowing a fruit bud. This can easily be learned, for their appearance is distinct and can be recognized by anyone who dissects a few buds in which the perfectly formed flowers will be found. Enough fruit buds must be left to provide a crop.

Pruning can, of course, be done at any season, but the best time is autumn or winter, since it is difficult to work when the tree is in leaf, and such work is naturally undertaken when there is little else to do outdoors.

Deciduous trees that have been growing close together as in a wood are often too weak to stand before the gales of winter if they are deprived of the protection and support of their neighbors, so if it is desirable to thin the woods, the trees which are left standing should be headed back. This reduces the strain on the roots, which will afterwards grow stronger as the top grows larger. Pruning such a tree, too, makes the adventitious

buds on the trunk grow so that the tree is soon clothed to the ground and begins to assume the shape and character of a tree which has always grown in the open. Coniferous trees, of course, do not have adventitious buds on the stems, and having lost their lower branches remain bare to the height of the living branches. Oaks and other hardwood trees readily clothe themselves anew.

The loss of our chestnuts has brought up many problems about the treatment of the woods where they have been taken out. Sometimes there are a sufficient number of oaks, maples, birches, dogwoods, etc., remaining so that nothing need be done, but in most cases I think it is best to plant hemlocks through the woods. The partial shade, the protection from wind, and the leaf mulch of the sparse deciduous wood is just what the hemlock thrives in. It is one of our finest trees and in association with oaks and birches it produces our most striking woodland effects.

Another problem which I have often found is that the dogwood trees which have been drawn up to an undue height by growing in the shade of chestnuts are too weak to stand alone and often bend over with the weight of snow, failing to spring

back when the snow is gone. It is useless to try to prop these dogwoods up. They might better be cut off at the beginning of the bend. They will look stubby, of course, for a few years, but they are not so noticeable in the woods and will soon put out new branches and make a fairly good low spreading tree.

Autumn and winter work in the shrubs is not so important as in the trees, because shrubs should not as a rule be pruned and if a branch dies it may break off at the root without injury to the bush itself. Many shrubs are all the time renewing themselves by the growth of suckers or sprouts from the crown.

Pruning shrubs is a bad practice, because it means in many cases reducing the number of flowers next summer. We often see forsythia bushes scattered on a lawn, each separate from the others, and all clipped to an even height and looking like brooms wrong end up. This is not only ugly in itself but reduces the amount of bloom, because the flower buds are fully formed when the plant stops growing in the fall. When warm spring days come these buds simply open; no more are formed until August or September.

The beauty of a shrubbery depends upon leaving the shrubs free to take their natural forms and outlines. The delicate spray at the ends of the branches which is characteristic of shrubs and trees alike cannot be cut off in winter without destroying their character.

It is a safe rule to prune flowering shrubs, if they must be pruned at all, as soon as the flowers have faded; or cut as many flowers as you like for house decoration. If it is done in this way the new growth begins at once after flowering and next year's buds are not cut off. Some shrubs which bloom late in the year, such as hydrangeas, can, it is true, be pruned in the winter or late spring, because the flowers come on the new wood. That is, the growth of June bears the flowers of September.

Roses present a different problem. The ramblers should not be pruned at all, but if thinning is desirable the oldest shoots may be cut out. The same is true of prairie rose, Japanese rose and other bush roses. Rugosa rose must have the old stems cut out every few years if it is to continue to look beautiful. Garden roses are pruned in March or April just before growth begins. This

is the time too, to prune deciduous hedges. Evergreen hedges are pruned when the new growth begins.

Vines must often be pruned, if they grow on the house or on pergolas, and it is a hard job to prune some of them! Honeysuckle, if it is allowed to grow as it will, gets into a hopeless tangle and the only thing to do is to cut it back without pity to a single main stem. Other vines must be treated in the same way, and the ease and efficiency with which the work is done depends upon the care which has been taken in training them. If they are trained to single straight stems a foot or so apart, each on a single wire, all side branches can be cut very quickly and the work is done. If, on the contrary, they are allowed to grow on chicken wire and twist in and out of that it is almost impossible to make a good job of pruning.

Wisterias, which bloom on the old wood, can be lightly pruned in February, but only the weak and straggling branches should be cut out or the flowers will be reduced too much in number. Other shrubs, like clematises, which bloom on the new shoots can be cut back, as may be necessary to keep them in bounds, in November.

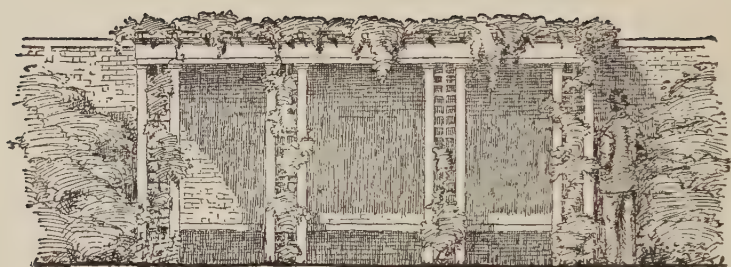
Pruning grapevines, like pruning orchards, requires special study. In general they should be cut back every autumn to six or eight buds, since the grapes are borne on the new growth and hard pruning stimulates that growth and hence the number of bunches of grapes. For further details one should consult some of the many treatises on the vine.

If I seem to favor a natural manner of pruning trees and shrubs, I would only point out that in some landscapes it seems the proper way to produce harmony. In other places it would clearly be inharmonious; the clipped tree or shrub is necessary in a formal scheme where its strong outline and rigid form gives us great delight. We are sometimes weak willed about using clipped or topiary work, yet we all delight in the neat hedge, the trim border, and the formal tree.

There are many shrubs which are not often used for topiary work, yet seem good subjects. The privets, barberry and buckthorne are commonly used for hedges and borders. Other shrubs and trees can be used with equal success. Clipped forsythias in summer are as good as privet and give some bloom in the spring. Lilac is often used

for hedges but is not so good as hornbeam or beech. Hawthornes of many kinds can be kept as low clipped shrubs or as clipped trees, and the dogwood when clipped turns its leaves square to the light and makes a compact surface. *Amoena azalea* is an excellent low border plant. Japanese yew can be used for hedges or clipped specimens. Many of the viburnums would, I believe, be excellent for hedges or topiary work. Conifers, of course, have long been clipped and there are excellent hedges of Norway spruce, arborvitae, hemlock and white pine.

EVERGREEN SHRUBS



CHAPTER X

EVERGREEN SHRUBS

THE strong color of evergreen trees and shrubs has been mentioned before as a great addition to the charm of our autumn and winter landscape. Some of the low junipers, yews and arbor-vitae are valuable for their winter color, but the most ingratiating effects are to be obtained by the use of broad leaved evergreen shrubs and small trees.

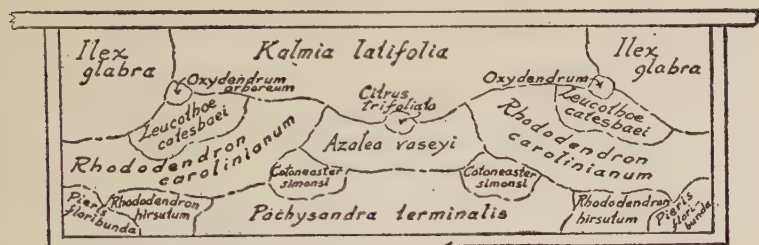
In the moist climate of England the winters are so mild that numbers of broad leaved evergreens grow luxuriantly, but our winters, when intense cold often comes without the protection of snow, and the frequent summer droughts are not so favorable for their luxuriant growth. There are many of them, however, which can be grown if they are given a suitable location, a specially prepared soil and a little coddling for the first few years.

It is better to prepare the ground in August for autumn planting or in October for spring planting, so that it will have time to settle during the winter.

The broad leaved evergreens are easy to handle and can be transplanted at any time of year. Most of them belong to the heather family and they have a mass of small fibrous roots which come up intact. They need a soil made acid by decaying oak leaves. Leaf mold should be added to good sandy loam in any proportion—half and half would be excellent, less would do, and more might not be any better. Well rotted manure of any kind can be used, remembering, however, that horse manure, largely because of the straw, rots and becomes neutral or slightly alkaline in reaction and if it is used must be acidified by the addition of unrotted oak leaves as a mulch on top. It is doubtful if anything is gained by using manure, for these plants grow vigorously with only their mulch of oak leaves. The beds should be dug out to a depth of eighteen inches or two feet and the mixed soil put in.

These evergreen shrubs grow most happily in a moist, equable climate, such as we find on the high mountain slopes of the Appalachians, where there is heavy precipitation and often cloud dew at night. The attempt should be made to reproduce these conditions as nearly as possible in our plantations.

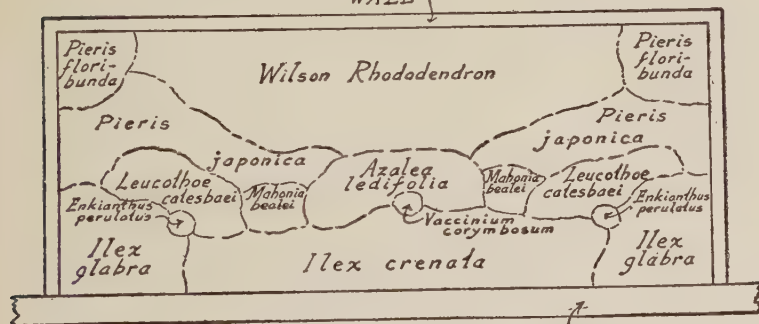
HOUSE



WALL



WALL



RETAINING WALL

EVERGREEN SHRUBS

We will find that the ericaceae do best when protected by trees, walls or buildings from drying winds and from too much sun. Near the sea or other bodies of water they are likely to do better than in the interior.

It is quite possible to make a garden entirely of broad leaved evergreens which will be almost as good to look at in winter as in summer. Such a garden can be formal or informal, these plants seeming to adapt themselves to either style. The box can be clipped, but unclipped it has a full, solid form which fits well in a formal scheme. The rhododendron and laurel will be suitable in any natural woods and they have, with all their irregularity, a sort of solidity of form which makes them harmonize with a formal scheme.

The plan on p. 177 shows a terrace bedded with broad leaved evergreens and the illustration on p. 280 shows the terrace in November. These evergreens, besides having the handsomest of all foliage, bear lovely flowers and some of them attractive fruit. It must be realized that in any garden the form and luxuriance of foliage is of first importance, the flowers are wholly secondary and are in any case a fleeting joy. It follows that the per-

fection of foliage will on the whole produce a better result than perfection of flowers without foliage.

There is a kind of bedding with evergreens which has the appearance of naturalism and yet is highly artificial. It is so easy that it has been overdone to the point of becoming bad taste. I speak of the so-called foundation planting of low yews, junipers, dwarf arborvitae and golden retinosporas, which we see around hundreds of suburban houses. It has, when well done, the softness of a feather bed and it probably appeals to our senses in the same way, but it has no beauty of color or form and our mind revolts from the contemplation of such exotic and childish artificiality in the guise of naturalism.

Many of the plants used in such bedding are good and can be used with broad leaved evergreens or alone. As a tree or bush the yew has its place in many plantations. Some of the junipers are lovely in their caressing way of growing over the ground and over the rocks, but the retinosporas, which quickly begin to fail in this climate, should be left in the nurseries and the thuya be kept for the formal garden.

In the naturalesque or informal garden good

foliage as a background for delicate flowers is essential.

The list which follows is not complete but it contains the most dependable of the broad leaved evergreen shrubs which can be used in this climate.

Azalea amoena, *Amoena Azalea*. Brilliant magenta flowers. A low, broad shrub, almost evergreen but the leaves turn to bronze shades in winter. It can be used for low clipped hedges.

A. *indica*, *Indian Azalea*. Foliage like above with white flowers.

A. *kaempferi*, *Torch Azalea*. Tall with scarlet flowers.

A. *ledifolia*, *Snow Azalea*. Large, pure white flowers.

Buxus japonica, *Japanese Box*. Shrub of rather open habit with small yellow green leaves. Said to be the only really hardy box in New England. May be the best for edging north of New York.

B. *sempervirens*, *Box*. Used for hedges, topiary work, etc., but is a handsome tree or shrub if left to grow naturally. Not reliably hardy north of New York.



A SCREEN OF RHODODENDRON

- B. *sempervirens suffruticosa*, Dwarf box.
Used for edgings, etc. Old specimens are often found 5-6 feet high and as broad. Has great beauty and value. It can be clipped or allowed to grow into its natural opulently rounded forms.
- Calluna vulgaris*, Heather. A straggling shrub 6-12 inches high, perfectly hardy in well drained soil in full exposure to sun. In flower for two or three months. Several varieties.
- Chamaedaphne calyculata*, Leather leaf. A branching shrub 2-4 feet high. Small leaves, white flowers in terminal racemes. Does well in sun or in dry garden soil. Not evergreen but the leaves hang late and it goes well with evergreens.
- Cotoneaster horizontalis*, Rock cotoneaster. This in nearly or quite evergreen and is an attractive small shrub having a spreading habit and shiny leaves and red fruit.
- Erica carnea*, Heath. Rosy red flowers. One of the few perfectly hardy heaths. Blooms early in spring.
- E. *vagans*, Cornish Heath. Hardy.

Euonymus japonicus, Evergreen Burning Bush.

A tall shrub with shining green leaves.
Hardy as far north as Long Island.

E. *radicans*, Wintercreeper. (see p. 202.)
Many varieties.

Ilex aquifolium, English holly. Best foliage and berries. Hardy north to Philadelphia.

I. *crenata*, Japanese Holly. A tree or shrub with small leaves. It is open in habit and grows rather slowly.

I. *glabra*, Inkberry. A compact shrub 5-6 feet high, growing wild in New England. Small shining leaves, very hardy and the best evergreen shrub for planting north of New York. It is still difficult to get in nurseries, though growing wild from Maine to Texas. I have never seen any attempt to clip it, but it may be suitable for hedges.

I. *opaca*, Holly. The only broad leaved evergreen tree hardy in the latitude of New York. It is a beautiful tree, though not so fine as the English Holly. Can be used for hedges. Is found wild on Long Island.

Kalmia angustifolia, Lambkill. Handsome dwarf shrub, worthy of cultivation.

K. *latifolia*, Mountain Laurel. Grows wild throughout New England and is the best hardy evergreen for the northern states.

Leucothoe catesbaei, Drooping Leucothoe. Hardy and desirable spreading shrub with plume-like branches. It should have moist soil and a shady position. A satisfactory and useful evergreen.

Magnolia glauca, Sweet Bay. A small tree, hardy but not evergreen throughout New England. It may hold a few leaves, near the ground or if in a protected situation, in the north but it should always be planted for its elegant shape and foliage and its fragrant camellia like blossoms.

Mahonia aquifolium, Hollygrape. Partially evergreen, handsome shrub, 3-4 feet high. Yellow flowers and blue fruit.

M. *fortunei*, Chinese Hollygrape. Similar to above but leaves are brighter green and more shiny. Not so pleasing as *M. aquifolium*.

Paschistima canbyi, Canby *Pachistima*. A bunchy ground cover of undetermined value.

Pieris floribunda, *Andromeda*. A low, native shrub with billowy form when old. Dark green leaves. Hardy in dry, sunny situations. Creamy white flowers in racemes which are formed in autumn but do not open until May.

P. *japonica*, *Andromeda*. Similar to above but leaves are more shiny. It will not endure such exposure to sun or drought, and is a taller and less pleasing shrub.

Pyracantha coccinea, Scarlet Firethorn. Evergreen and very thorny.

Rhododendron This is a large and interesting family. They are from 1-20 feet or more high, and all have evergreen leaves and good flowers. Wilson, the Asiatic horticultural explorer, says we still need a reliably hardy *Rhododendron* for New England, but nevertheless most of those listed below are hardy most of the time. The flowers of the hybrids, because of their color, profusion, and substance put

them among our most important flowering shrubs.

- R. carolinianum, Carolina Rhododendron. Handsomest of the dwarf rhododendrons. Dark green leaves.
- R. catawbiense, Catawba Rhododendron. A native and the hardiest. As a parent of hybrids it has furnished our most reliable flowering rhododendrons. Var. album has better flowers than the type.
- R. caucasicum, Caucasian Rhododendron. Compact clusters of yellowish white flowers. The parent of several valuable hybrids, among them being Boule de Neige.
- R. coriaceum, Yellowspot. Hardy and desirable.
- R. delicatissimum, Hybrid. R. maximum x R. catawbiense. White flowers tinged pink. A desirable hardy variety.
- R. laetevirens, Wilson Rhododendron. A hybrid. Is a low shrub with handsome foliage, flowers small, rose color. It will cover either sunny or shady banks and

seems to endure sun and drought as well as *Pieris floribunda*, with which it can always be associated.

R. maximum. Native as far north as New England. Large; usually collected in the mountains and used for its foliage alone as the flowers are not large or conspicuous.

R. minus, Piedmont Rhododendron. From the Appalachians and a hardy small shrub.

R. myrtifolium, Myrtle Rhododendron. Compact round topped bush. Pink flowers.

Viburnum rhytidophyllum, Leatherleaf Viburnum. A large bush, rather straggling in habit, with wrinkled and shiny evergreen, leaves. It promises to be useful for garden and shrubbery.

Following is a list of hybrid rhododendrons considered hardy at the Arnold Arboretum.

Album elegans, white blush, late

“ grandiflorum, “ “

Atrosanguineum, red, early

Chas. Dickens, “ “

Catawbiense album, white, early

Everestianum, light purple, early

Henrietta Sargent, pink, early

H. W. Sargent, red, late

Lady Armstrong, rose, early

Mrs. Chas. Sargent, pink

Purpureum elegans, dark purple

“ grandiflorum, dark purple,
late

Roseum elegans, rose, early

The broad leaved evergreens are unequalled for richness of color and luxuriance of growth, and give the landscape the last perfection of form and texture. Like all good things they may become tiresome if overdone. It is wise, therefore, to plant with them many deciduous shrubs which give the pleasure of contrasting color and texture.

The use of deciduous shrubs gives us an opportunity, besides, to break up the mass of evergreens and to vary the height of the plantation, thus, perhaps, improving the composition. We are often tempted to plant evergreens in a bed with a waving line of some low plant for a border and a neatly trimmed turf edge, but this should be resisted when we are doing informal work for it tends to make the

whole mass hard and tight. In any case, the broad leaved evergreens are likely to become too even and compact, without taking on a definite form. They are then repellant to the eye, which seems to demand a continual movement in the outline and in the mass. This movement must not, of course, be allowed to become restless.

It is always disturbing to have the qualities which we associate with formal work appear in a naturalesque scene. The hard edges and the tight masses of a clipped hedge should not be seen in the flowing stream line border plantation of a naturalesque garden, nor should we ever if we can help it, plant a border which appears to be a hardened mass of shapeless, flowing—chocolate pudding for example.

Among the shrubs which seem to be at home with the broad leaved evergreens are the following:

Amelanchier oblongifolium; Thicket
Shadblow

Aronia arbutifolia, Red Chokeberry

A. melanocarpa, Black Chokeberry

Azalea arborescens, Sweet Azalea.

A. calendulacea, Flame Azalea

- A. *canescens*, Piedmont Azalea
- A. *nudiflora*, Pinxterbloom
- A. *vaseyi*, Pinkshell Azalea
- A. *viscosa*, Swamp Azalea
- Benzoin *aestivale*, Spice bush
- Clethra *acuminata*, Cinnamon Clethra
- Cercis *canadensis*, Redbud
- Cornus *paniculata*, Gray Dogwood
- Euonymus *americana*, Brook Euonymus
- Halesia *diptera*, Silverbell
- Hamamelis *virginiana*, Witch Hazel
- Hydrangea *quercifolia*, Oakleaf Hydrangea
- Ilex *verticillata*, Common Winterberry
- Lyonia *ligustrina*, He-huckleberry
- Styrax *japonica*, Snowbell
- Vaccinium, Blueberry
- Viburnum *acerifolium*, Mapleleaf Viburnum
- V. *carlesii*, Fragrant Virburnum
- V. *cassinoides*, Withe-rod
- V. *dentatum*, Arrowwood
- V. *lentago*, Nannyberry
- V. *molle*, Kentucky Virburnum
- V. *wrighti*, Wright Virburnum
- Zanthorhiza, Yellowroot

In addition to these shrubs and trees it is advisable to plant ferns along the edge of the bed. These are pretty in themselves and serve also to hide the mulch of leaves which must be kept on the rhododendrons and which some people think unsightly.

List of ferns:

Adiantum pedatum, Maidenhair fern.

Athyrium filixfemina, Lady fern.

Dryopteris filixmas, Male fern.

D. marginalis, Leather-wood fern,
2 feet.

Dennstaedtia punctilobua, Hay scented
fern.

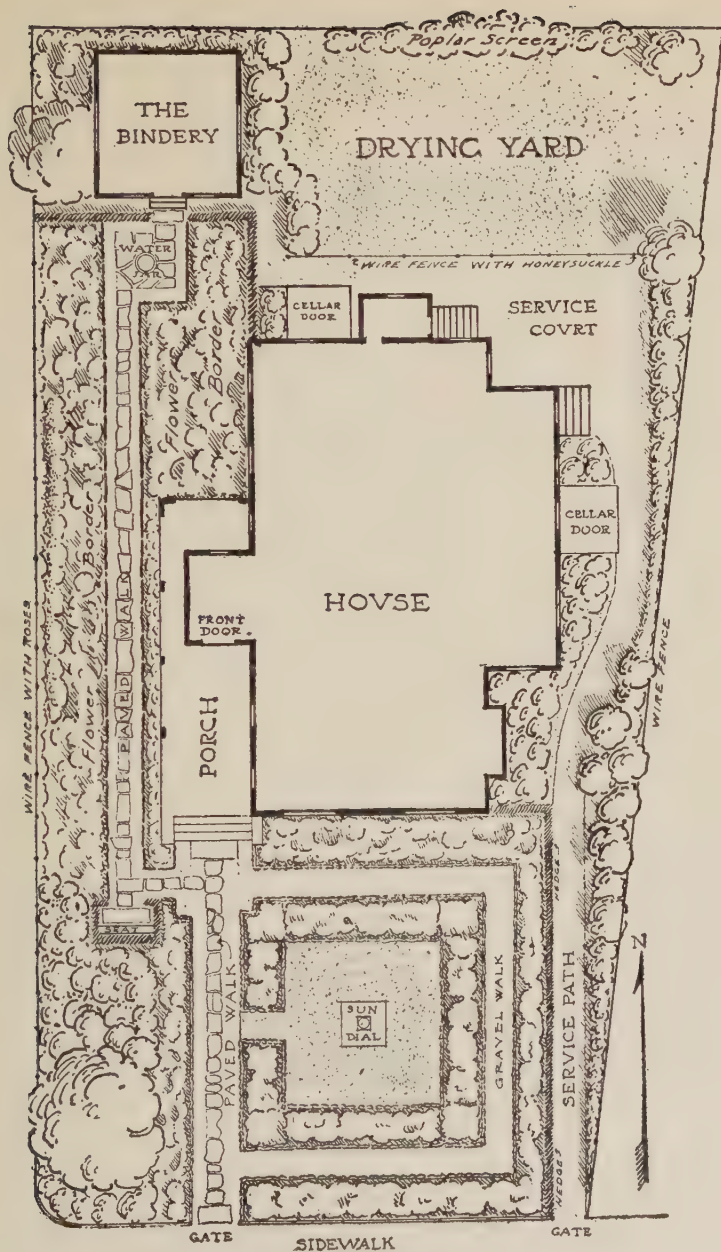
Osmunda regalis, Royal fern.

Polypodium vulgare, Snake fern.

Polystichum acrostichoides, Christmas
fern, spreading evergreen.

Pteretis nodulosa ostrich fern.

The association of ferns and broad leaved evergreens is a happy one, for the same conditions suit both. Lilies, too, are at home in this company and add much to the beauty of the plantation, because they bloom after the evergreens, thus adding their bloom to the richness of the plantation and because



A CAMBRIDGE GARDEN

they look better there themselves with such a handsome background. The lilies can be planted in spring or fall. It is best perhaps to start in August with the Madonna lily and plant the others as they are ready until November.

List of lilies :

- Lilium auratum, Gold band lily
- L. brownii, Brown's lily, hardy but
plant on its side
- L. canadense, Canada lily
- L. candidum, Madonna lily
- L. Grayi, Gray's lily
- L. Henryi, Henry lily
- L. regale, Royal lily
- L. speciosum, Speciosum lily
- L. superbum, American Turk's cap
- L. testaceum, Nankeen lily

The edge of the rhododendron bed is a good place for many small and rare flowers which it would be difficult to establish anywhere else.

- Actea alba, White Baneberry
- Shortia galacifolia, Shortia
- Dicentra cucullaria, Dutchman's breeches
- Galax apylla, Colt's foot
- Viola, in variety.

VINE AND GROUND COVERS



CHAPTER XI

VINES AND GROUND COVERS

WHEN we live in the country and get much of our enjoyment from constant observation of the changing scene, we are not long satisfied with bare ground and dead weeds in winter. No matter if everything is raked clean, smoothed up, and in order, we crave the richness of color and texture of an evergreen ground cover. Mere neatness is not enough to satisfy us for long.

Never is the warm forest floor of dead leaves so pleasing as when it is contrasted with the cool green of moss or ferns, and nothing adds so much to the finish of a shrubbery or shady hillside as a carpet of myrtle or ivy. It is the last touch added to make the whole perfect in its appeal to the senses. An evergreen ground cover is one of the easiest things to establish, for it grows under conditions of shade which are difficult for most plants, so that it has few enemies to struggle against. Every year a few weeds, a few seedling shrubs and a sapling

or two must be pulled out, but it requires little other care.

Carpet plants, as they are called, may do much to cover the bare appearance of shady banks, spots under trees and other places in autumn. Bare ground at any time of year, except in cultivated fields, seems unsightly and actually is evidence of recent disturbance or poverty of the soil. The normal condition where the shade is too dense for anything to grow is to have a thick carpet of leaves and often this is all that one can have and it is at the same time the best cover for bare ground.

People frequently want the impossible, as to grow a good lawn under the low dense branches and among the matted roots of a spruce or beech. These are not the proper conditions for a lawn and to attempt to maintain it there is a mistake. The space should be planted with ferns, myrtle or other ground cover, if possible, but it may often be better to plant low shrubs at the edge of the shaded area to separate it from the lawn and to keep the falling leaves from blowing away. To establish a ground cover in such a place may necessitate new soil on top of the old and some years of care, which, con-

sidering the pleasant appearance of a carpet of dead leaves, may not be worth while.

The conditions must be right for the ground cover. There are few things which will grow in the dense shade of a pine or hemlock grove; more light must be given it in such a place or the attempt abandoned. The heavy foliage and the roots near the surface of trees like the Norway maple make an impossible spot also. Under large oak trees, where the leaves are so numerous that the plant is smothered in a season, is another impossible situation for most plants.

Myrtle is one of the best ground covers. Its small shining leaves, its low growth and rapid increase by underground shoots, and its delicate blossoms are details which together make it nearly perfect. Some people associate it with cemeteries, but the feeling of repugnance caused thereby should be overcome.

Pachysandra is, next to myrtle, the most important ground cover. It will grow in fairly dense shade, it spreads rapidly, and is perfectly hardy. In intense cold it wilts and is not so pleasant to look at.

There are many evergreen ferns, but only the

larger varieties can be considered as ground covers. There are few plants with such pleasing foliage as the ferns, which we should use more frequently and more intelligently.

The evergreen vines that will grow north of New York are all too few. The most satisfactory and altogether a vine of distinguished merit is wintercreeper. Its leaves, which are a deep green, keep their color all winter without change. The best of the many varieties is big leaf wintercreeper, which has larger leaves than the type and seems to fruit better or perhaps at an earlier age. The fruits are ripe in October and are yellow and orange and red like other euonymus. It clings to stone, brick, or wood, and forms a dense mantle of small shiny leaves. It has been planted in this country for many years but is still too little known. The variegated varieties are not so pleasing as the green, as they seem not to stay evenly variegated but come sometimes perfectly green with here and there a white spray from which all color is absent. These white sprays not only seem sickly but are so, and soon die.

Wintercreeper will endure much shade and can be planted under trees, at the north of buildings,



CEDARS AND VINES

on walls or fences. It will grow on the trees and spread over the ground. Like all Japanese plants, the euonymus should not be used on dry sandy banks, as it is not likely to endure such hard conditions. On a rocky bank where its roots can go deep in the fissures it will probably be successful even in full sun. The variety *vegetus* can be grown as a low shrub, clipped in any shape, and all varieties can be clipped, if one wishes, though they are neat enough without clipping. I have never seen its leaves change color or brown even in the hardest winter.

English ivy is possibly the handsomest of all evergreen vines, but it cannot be depended on not to winter kill north of Philadelphia. Nevertheless it should be planted, for even if its leaves go brown in a hard winter, the branches usually live and send out new leaves in the spring. Winter injury to the ivy is more likely to be caused by sudden changes of weather than by intense cold. It is supposed that melting snow on the leaves suddenly freezing hard as the sun goes down, or bright sun quickly warming the leaves after a night of zero temperature, causes the injury. It is, therefore, considered advisable to plant ivy and other broad

leaved evergreens in the shade of trees or on the north side of a house where the temperature will be more uniform than in a sunny exposure. Ivy, too, is a good ground cover under trees. It has many forms with little to choose between them. It clings to stone or wood. It does not bloom and bear fruit until it has been planted fifty years, so we who plant today are not likely to see its blue-black berries.

The evergreen honeysuckle, *Lonicera Henryi* will probably be like Hall's honeysuckle, an excellent rough ground cover. All are more nearly evergreen on the ground than when grown on trees or trellises. They are more protected thus even without snow. The honeysuckles must be watched for they appear likely to become troublesome weeds. Their seeds are spread by the birds, and they seem so much at home here that they may easily destroy better plants. In the woods around Washington there is a honeysuckle which appears to be doing damage to the trees by climbing to the top and shading them. They are hard to eradicate when once established, for the roots are strong and any little piece left in the ground will send up a new shoot.

For sandy or rocky banks where it is desirable to keep the cover low there is a wide choice of ground covers.

For pure sand and not too much shade there is nothing better than the evergreen bearberry *Arctostaphylos Uva-ursi*. It forms a dense mat of small shining leaves, has red berries and grows rapidly. On Cape Cod it grows luxuriantly and is slowly covering all the railroad embankments, being in many places the sole occupant of their sterile slopes.

On rocky banks honeysuckle, roses, moss pink, sunrose and many others of the following list can be made to grow successfully.

Shrubby Ground Covers

Arctostaphylos uva-ursi, Bearberry. This seems difficult to transplant but can be bought pot grown in many nurseries. It should not be attempted in limestone soils but will grow in sun or partial shade in sand or good soil. In good soil where weeds flourish it will have to be carefully watched to see that it is not crowded out.

Abelia grandiflora, Glossy Abelia. A low shrub of spreading habit, good foliage and fragrant flowers in August and September. It is not reliably hardy north of Philadelphia. It can be used on good soil and will endure some shade.

Cotoneaster horizontalis, Rock Cotoneaster. A spreading low shrub with bright partly evergreen leaves and brilliant red berries. Use in good soil. It is a charming shrub at any season.

Euonymus radicans, Wintercreeper. Several varieties described above.

Hedera helix, English Ivy. In many forms and can be used in many situations. Possibly the easiest ground cover to establish under trees.

Helianthemum chamaecistus, Common Sunrose. A low shrub not over one foot high bearing yellow, red, or pink flowers. It thrives in full sun and in dry situations.

Hypericum Bucklei, Mountain St. Johnswort. A spreading plant adapted to full sun. Yellow flowers, almost evergreen foliage.

Will need some care to keep it from being crowded out by weeds and grass.

Mahonia repens, Running barberry. This forms a low mat (not over 6 inches) of evergreen leaves. It promises to be useful in light shade or sun but should not be tried on dry banks.

Rosa wichuraiana, *Wichuriana* Rose. In many situations the handsomest ground cover we have. Its brilliant dark foliage, large white fragrant flowers in summer and in winter its green stems and red haws are ever pleasing details. It will grow on rocky banks, soon covering them with a dense mass of tangled branches. Happily when once established it shades the ground so completely that little weeding is required, for weeding that spiny mass is next to impossible. Hybrids of *Rosa wichuraiana* can be used with it. The best of these are *Evergreen Gem*, *Mandas Triumph* and *South Orange Perfection* with pink flowers. The crimson rambler hybrids should not be used with *wichuraiana*.

Symphoricarpos vulgaris, Coralberry. This is a shrub sometimes 3-4 feet high, but its spreading habit, its capacity to endure dense shade and its tendency to form new plants by layering make it a desirable high cover. The foliage is good and the red berries, held late in the winter, are interesting.

Thymus vulgaris and *T. serpyllum*, Thyme. Dwarf shrubs spreading rapidly and forming dense mats covered with purple flowers. Fragrant foliage. A good cover for dry sterile banks. In the Berkshires *Thymus vulgaris* has become an annoying weed in the pastures.

Vaccinium vitis-idaea, Mountain Cranberry. A low spreading vine with shiny evergreen leaves and red berries. It must have, like all plants of the heather family, a soil made sour by decaying oak leaves. As a ground cover in the shade nothing could be handsomer. It is not easy but it is not impossible to grow, and it is worth any effort.

Zanthorhiza apiifolia, Yellow Root. A shrub 1-2 feet high, with handsome leaves clustered at the summit of the short stem. It forms a dense mat and will grow in shade but will not endure the presence of lime in the soil. Its autumn color is a brilliant chrome yellow.

Herbaceous Ground Covers

Ajuga genevensis and *A. reptans*, Bugle. Are vigorous growers almost becoming weeds in the flower garden. Either will endure shade and is likely to be the survivor in any struggle for a place in the sun. The flowers are a lovely blue.

Cornus canadensis, Bunchberry is not properly a carpet plant but it is so handsome with its bunch of red berries that it should be attempted where there is a leafy soil.

Lysimachia nummularia, Money wort is a hardy trailing plant with yellow flowers. It will grow anywhere and is almost impossible to eradicate from lawns when once it has a foothold.

Pachysandra terminalis. This is a low evergreen plant from Japan which will grow in

heavy shade. It spreads rapidly and forms a perfect ground cover of a pleasing green. It should not be attempted in a dry place.

Phlox subulata, Moss Pink. This is a creeping evergreen covered in the spring with white, pink or purple magenta flowers. It will not grow in shade but delights in the sunniest, driest positions on rocky or clayey banks. It endures the competition of grass fairly well but should not be attempted where heavier weeds will grow.

Sedum acre, *S. stoloniferum* and other rock cresses in variety can be grown on any exposed rocky bank. They require practically no soil and are extremely useful carpet plants.

Vinca minor, Common Periwinkle. For a long time this was the most popular cover for shady places and it is still of great value because of its persistency, its blue or white flowers and its shiny evergreen foliage. It spreads rapidly and never seems to die out.

Rocks or stony hillsides in the open can be planted with many spreading junipers, which make a lovely green carpet but must have full sun.

In cool shady woods the rocks can be planted with ferns of many kinds (see p.190) with Canada yew or with moss, if one has the patience to collect and plant it. We know little as yet about the cultivation of mosses, and it seems doubtful whether things which seem to grow without our aid need to be cultivated. If mosses do not grow naturally it is fair inference that the spot is not suited to them.

The appearance of deciduous vines in winter deserves consideration because every place should look well even during the seven months when the trees are leafless. The winter season leads us to the enjoyment of the more minute and delicate beauties of nature and among these the leafless branches are the greatest. The bare wistaria casting its twisted shadows on the house may have as much beauty though of a different sort as the same vine in full leaf. We may not be out of doors as much in winter to enjoy such things, but is it not important when seen from the windows of the house? The Japanese creeper *Ampelopsis tricuspidata* when young makes a delicate lace-like

tracery on the building to which it clings. It is then interesting in color, but when old it loses its delicacy and has an unlovely way of dropping the leaves without the stems, which hang for a long time.

A better vine at all seasons is the native *Ampelopsis quinquefolia Engelmanni* which is in appearance identical with the Virginia creeper except that it will cling to brick or stone. It should be planted in preference to the Japanese creeper except in cities, where the latter may still be superior.

The strong stems of the trumpet creeper, *Bignonia radicans* resemble the grape in stiffness and roughness of bark, but they lack color, being that of a February lawn. Grown on a low post and allowed to spread somewhat over the ground the trumpet vine becomes a picturesque shrub, showing its flowers to best advantage.

The grape is pleasing in winter because of the warm color of its branches and its picturesque vigor. The twining tendrils coiled like springs are interesting details. Some of the grapes hold their berries like *ampelopsis* for a time after the leaves have fallen. Their foliage suggests the vineyard

grape but is often a brighter green and less liable to be injured.

The clematis in winter is a disorderly mass but good in color. The feathery seeds are delicate and pretty.

The honeysuckle *Lonicera japonica halliana* is a messy tangle but is made more interesting by its dark berries and, after zero weather, by its brown leaves. It is often green well into January. Other good honeysuckles are Sullivant's *Lonicera prolifera* a low climbing plant with spikes of purplish flowers. It has grey green leaves and bright red berries in autumn. *Lonicera sempervirens*, the trumpet honeysuckle, has terminal clusters of scarlet or yellow flowers. It is evergreen as far north as Washington, and grown on low stakes at the north, or on rocks, will hold its leaves late into the autumn.

The orange and yellow fruits of the bittersweet *Celastrus scandens* make it perhaps the handsomest of all the vines in winter. The vine itself is interesting because of its light smooth bark and its many twistings and turnings. A better variety is said to be *Celastrus orbiculatus*. The akebia resembles the bittersweet in character, but it is

more delicate though no less intricate in its windings. It holds its leaves late into autumn.

The wistaria has many beauties and great picturesqueness, particularly when it is old and its strong rope-like stems have perhaps bent and broken the iron fence which its delicate branches used years ago as a support.

The handsomest of all vines, is the common greenbrier. The green branches, yellow tipped thorns, the wiry appearance and the twisting tendrils give it an exotic beauty which surprises us in the winter landscape. In the distance it seems, as it clings to some old apple tree, like a delicate green silk scarf blown against the tree and caught. The dark blue or black berries grow in little bunches from the axils of the leaves. Few woody plants have such great beauty. It grows luxuriantly in wild places but seems difficult to transplant. It should be used more often where an impenetrable thicket is needed or can be endured. It cannot be bought in nurseries.

The climbing hydrangea *Hydrangea petiolaris* has in winter a flaky reddish bark and large green buds. It clings to walls and has some value in the



A DECEMBER ICE STORM

winter landscape. In summer it is one of our loveliest vines.

The jasmine *Jasminum nudiflorum* is a shrub or vine with long drooping green stems. Trained to a wall or house it makes a graceful covering and its yellow fragrant flowers may open in February or March. It can be planted at the top of a retaining wall or bank and the branches will droop down.

The climbing roses are full of delight in winter with their rich green and bronze colored stems, their haze of short branches and their reddish haws.

The cluster rose *Rosa multiflora* is not only a handsome shrub 12-15 feet high with spicy fragrant white flowers and brilliant red berries but it will also grow high in trees or on other shrubs. But it must be watched for it is a villain and will scramble over the tops of better shrubs, shading them to death perhaps. Its seeds seem to be eaten by birds so that it may spread rapidly over the country and become a great pest.

The best grapes for their autumn and winter effect are:

- Vitis coignetiae*. Enormous thick prominently veined leaves, pale on the lower side, turning scarlet in autumn.
- V. *cordifolia*, the frost grape, has thin leaves, light green on both sides, and large clusters of small blue fruits. It is one of the largest and most vigorous of the American species and desirable on this account, as well as because of its light green leaves, for arbors and pergolas. The grapes are edible after frost.
- V. *davidi*. A grape with the stems thickly covered with spines. The leaves turn red in autumn. It is tender in the north.
- V. *labrusca*. The Fox grape. The common wild grape of New England. The berries are dark purple, brown or amber. The leaves underneath are covered with tawny or brown felt. The best grape for jellies, and a parent of most American cultivated grapes.

The greatest beauty of vines perhaps is the effect of abundance or prodigality of growth and richness of texture. This effect, of course, is secured in the

highest degree when they are allowed to grow unhindered over shrubs, over trees, on rocky ledges and walls. Abandoned in this way they have many surprises and if they become too much at home they can be cleared out and tried again somewhere else.

The sparseness of effect which comes from too careful pruning is to be avoided. It is better perhaps to endure a little suggestion of unkemptness for the sake of richness.

The strong growing vines such as the trumpet vine, grape, bittersweet and English ivy should often be planted on trees. It is not true that they injure the tree except by the loss of a few branches due to shading. This is of little consequence when we see the trumpet vine flinging its red flowers to the breeze or the grape hanging like some rich fabric and perfuming the air with its delicate sweetness.

There are places where the luxuriant growth of vines becomes a nuisance not to be endured. Unchecked they will cover everything with a soft fluttering mantel of green, which destroys all form, all contrast between rocks and foliage, and often weakens the design of a garden by hiding the lines

which should be strong, and reducing all to a uniform shapeless green.

It is no more pleasing to have a building swathed in vines so that it loses color and appears as if made of leaves supported on a light framework. In either case the vines should be clipped or cut or completely removed. They must always be considered as decoration for the garden or for the house, like rugs on the floors or hangings on the walls.

WOODS AND THICKETS
IN WINTER



CHAPTER XII

THE WOODS AND THICKETS IN WINTER

A SHRUBBERY or a small wood is one of the indispensable features of year round country places, which are in winter too often bare and wind-swept and lack any incentive to outdoor enjoyment. The place which has nothing but smooth, unbroken lawn may in summer please us by its simplicity, but in winter it is likely to look stupid, and it will surely be cold and possibly blown bare of snow.

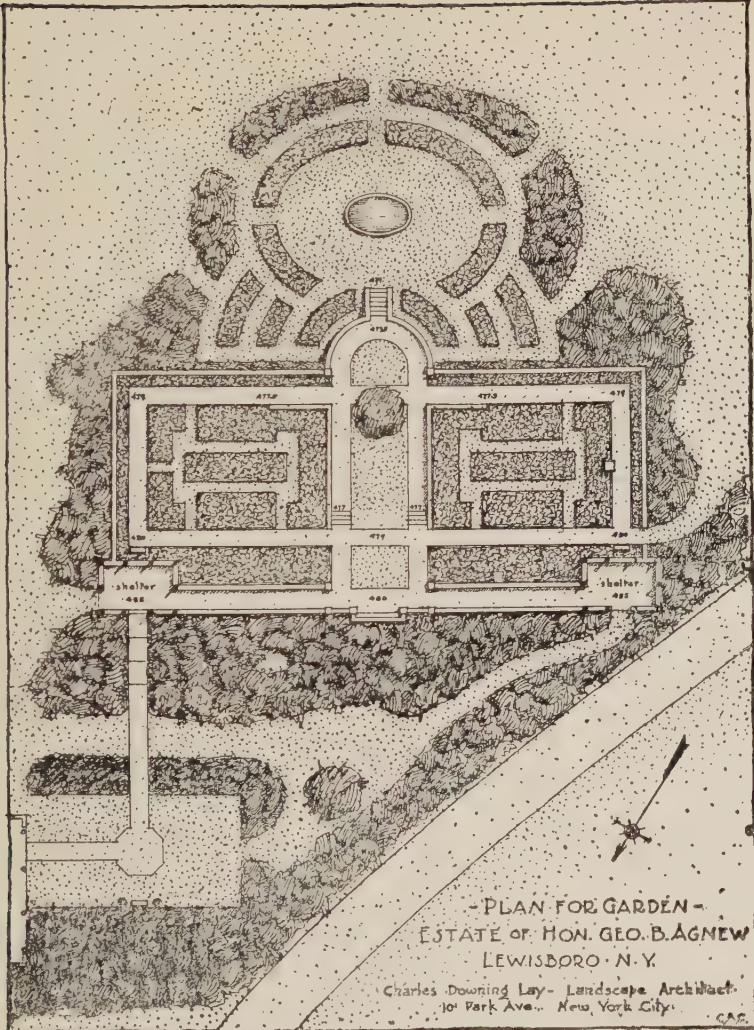
A comfortable shrubbery should be as common as a lawn, and indeed what is a lawn unless it be fringed or enclosed by a border of shrubs?

There is, we are told, no place or climate where more small deciduous trees and shrubs can be grown than in the Eastern United States. The flora of this region is particularly rich in these things, and we have in addition a great number introduced from Europe, from China and Japan, which are proving hardy and which thrive in this climate.

The shrub border has its value in winter, but a true shrubbery spreading over considerable space through which one can walk on grass or gravel and find little nooks open to the sun but protected from the wind is a real winter resort if the day be sunny. Without the sun we can still be comfortable for a time if we have a fire.

There might be, in such a shrubbery, an early autumn nook planted with tartarian maple, which turns in September. There we should find, too, the sumachs with their deep crimson fruits and leaves gradually turning scarlet, together with a few purple asters and golden rod. The later autumn nook will probably be near the winter camp-fire, for many of the shrubs and trees which turn color and hold their leaves late have also handsome fruit.

The grass in this winter resort will often be green well into November, and in the spring, because of its protected and sunny position, it should be the first to grow. One compartment may be planted with the shrubs which hold their leaves late (such as the common privet, *Ligustrum vulgare*) and some of the cotoneasters in winter because of their colored fruit. Here, too, we should



A COUNTRY GARDEN

find the high bush blueberry with its crimson branches.

Another part of the shrubbery may be devoted to early spring flowers. There one could plant all the early plums and cherries, February daphne and the shadblow, the redbud and the dogwood. The combinations in such a shrubbery are endless and full of delight.

The principal division of the shrubbery, although planned for winter, will be much used at other seasons, for it should be the largest and the best furnished. A fireplace of stones, to reflect the heat, so that we can be warm with a small fire, will be useful for all sorts of picnics, for clam bakes, and best of all, for making maple syrup in the early spring. For this a pan should be provided of sheet iron with a corrugated bottom. This pan should be perhaps three feet wide and four feet long. The syrup will boil quickly in such a place and the making prove an easy and delightful winter occupation.

Rocks will add much to the beauty of such a winter shelter, for shelter it is though open to the sky, and a spring or brook running through the place, is the height of luxury.

There should be many feeding boxes for birds

and many nesting places, and the birds will without being asked roost in the shrubs and eat the berries.

The berry-bearing bushes for birds are barberry, cornus in several varieties, hawthornes, roses, bittersweet, wild grapes, and any others which hold their seeds above the snow.

Robins, chickadees, nuthatches, purple finches, sparrows, jays, woodpeckers and some others may become daily visitors through the winter and rarer birds will be occasionally seen.

The models for such delightful shrubbery can be found in any New England pasture where the bayberry, wild roses, sumac and low junipers and tall cedars grow in natural wildness. Every place has some rocky field or hillside protected from the north winds where such a shrubbery can be created. Its arrangement will be suggested by the site and the more closely the characteristics of the site are followed the more successful it will be.

It might be called a winter garden and such a place would show all the variety and charm of color of the shrubbery and of the fruits which hang throughout the season and is never without interest and delight.

Without such a retreat as this one misses half the fun of autumn, winter and early spring in the country, for wind is our enemy then and unless we have sufficient barriers it is sure to drive us indoors. The windswept hilltop offers no inducements for outdoor life in winter.

In spring the first green grass will be found there, especially if there is a rill or trickle of water through it, and there the spring bulbs will be found in perfect condition, for they, too, dislike the blasts of March and April and frequently dry up or brown if exposed to them.

In summer this garden may be neglected, though there will be many times when the cool shade of its surrounding trees and its openness to the southerly breezes will be found refreshing.

Wooden benches, possibly with wooden platforms for the feet, or a shelter with a tight roof will add much to one's mid-winter comfort.

The shrubbery border of this garden should be of evergreens, shrubs, and small groups of autumn and early spring flowers in front of the shrub border, or it may be found better to have the plants in groups with rhododendrons or laurel between, for the sake of their effect in winter.

It is always a problem to decide how to plant shrubberies. If we plant them with small plants close together so that they will look well in a few years, they will in a few years more be crowded, spindling things, and if half are taken out it will take several years more for those which are left to recover.

A better plan is to give more space to those which require it, and whether they be small or large plant them far enough apart so that they will never require thinning. If we can plant thus with large shrubs the cost will be no greater because of the larger area they cover and the appearance will be good from the beginning. It often happens, however, that we cannot find large shrubs to buy or that they will not stand being moved when large, so that we are forced to plant with small sizes. Even so, I prefer to plant them far apart, giving them room to grow, and cultivate the ground around them for a few years.

The woods are never so pleasant as in winter or, rather, when they are leafless. No matter how the wind may blow it is always calm and, if the sun shines, warm in the leafless woods.

In summer woods have appealing features. The cool moisture, the fragrance of ferns, of the leafy floor, the dark shadows and deep silences broken only by the thrush, have their own appeal, but we tire of it and long to get out into the windswept pastures or to the shore where one can see the streaming cirrus clouds or the thunder heads piled high.

In summer the woods are often hot, in winter more comfortable so that we can enjoy their many delights of drifted snow, green moss and dripping ice-encrusted rocks, but whether they are used chiefly in winter or summer the woods should have the same care, planned according to the end we seek.

It is, of course, apparent that there is no compromise possible between the ends of forestry and of woodland beauty. Forestry is only a matter of dollars and cents, of growing the largest possible crop in the cheapest way and of marketing it when ripe at the highest price. If in this pursuit we happen to have a season or two when the woods delight us we are so much ahead but nothing must be sacrificed to prolong our delight.

The woods which are managed and maintained

WOODS IN WINTER



for their emotional values must have a different treatment. They must be studied for their expression, for their possibilities in the intensification of that expression, and some trees must be left to grow past their prime, when the forester would say cut, because we must have great trees that link us with the past.

The forester might decide for a mixed hardwood stand to be followed by pines when harvested, while we perhaps confine ourselves to one species, determining to have only great white oaks or only white pines, or we decide for other than reasons of profit to have pines here, oaks there and hemlocks in another place.

We must, too, thin as we please so that the trees do not hide the woods, and so that the undergrowth of virburnum, huckleberry, laurel or whatever, has light and air enough to flourish.

Sometimes people who admire neatness and order are tempted to clean up a grove or a small wood. They trim the dead wood off the trees, pick up the branches which are on the ground, and then probably conclude that the dried leaves, being also dead and cast off, might be taken away and grass established in its place. This is a mistake for it

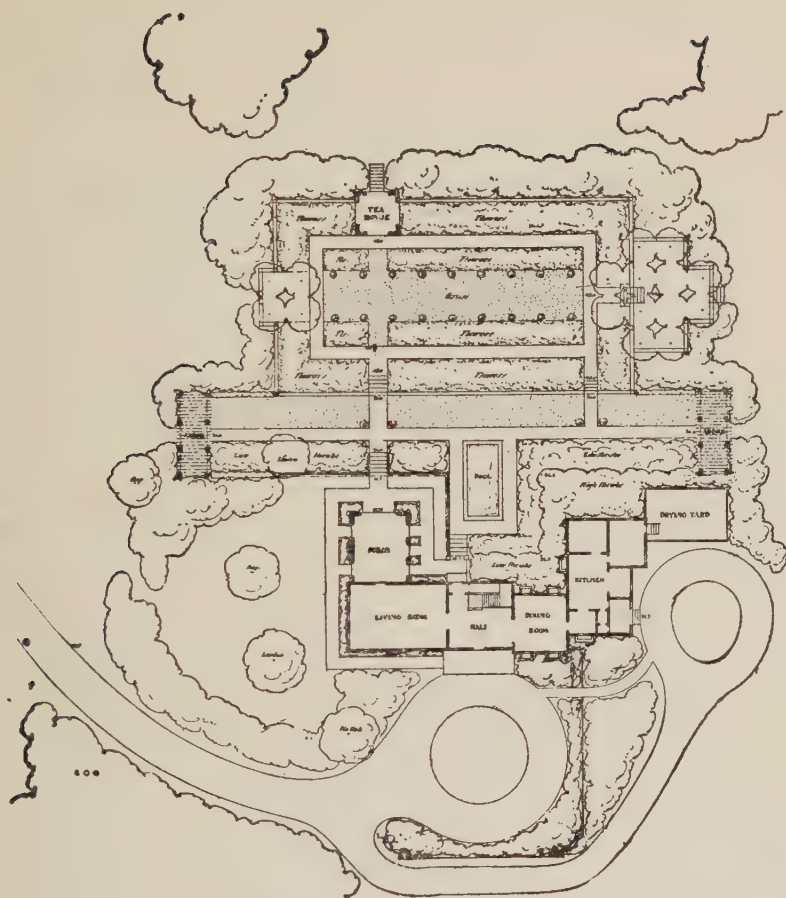
destroys the forest floor, the rich carpeting of decaying leaves which conserve moisture and keep the soil acid.

The result may sometimes be more disastrous, for the change in the condition under which the trees have grown for many years may kill them. If the layer of leaf humus is thick and is all removed it exposes several inches of bark, which is in effect root bark, at the base of the tree. Often this bark cannot stand sun and cold and is killed, leaving a scar or even killing the tree itself.

A better plan would be to leave the grove as it is, but to attempt to enhance its natural charm by additional planting of shrubs and flowers. It can be made usable by means of stepping stones or slab walks or a gravel walk if the traffic be heavy.

It is astonishing to find, if one lives in the country and is not simply a commuter, how much time can profitably be spent out of doors so long as one is out of the wind.

If you read Keppart's fascinating book on Camping and Wood Craft and have any wildness in you you will not be satisfied unless you have in the winter resort a frame of logs on which to stretch a tarpaulin and some fur robes to throw over leaves



A LONG ISLAND GARDEN

or straw for a bed. With some logs to sit on, a chopping block nearby and plenty of wood to be worked up for the fire you are equipped for any weather and for any length of time.

I regret the passing of the woodshed, and I propose to build for myself a new woodshed of old timbers. It is to be about twenty feet long, open to the south, twelve feet wide and built wind tight. At one end there will be a work bench for rough carpentry. Sawdust and shavings will be plentiful on the dirt floor and there will be several chopping blocks on which to sit in the sun and listen to the barnyard fowls or the spring birds or the borers working in the woodpile. The fragrance of oak and pine wood will be ever present.

Something can be done on an all-winter place to control the drifting snow. A hedge or a line of bushes or evergreens skirting the road will keep the snow from drifting across a hill top or burying the road. One cannot prevent drifting in every storm, for the direction of the wind may change and make our precautions of no avail. But a little study of the conditions will show certain places which should be protected.

SPIRIT OF THE LANDSCAPE



CHAPTER XIII

THE SPIRIT OF THE LANDSCAPE

WE often hear people wish that the season for flowers would last longer. They would like to have pæonies in August or chrysanthemums in Spring, not being able to get their fill of these delights at the proper season. However childish such desires may be, the prolongation of a season of blooming or fruiting may be possible, for it has been accomplished to a degree in the fall-bearing strawberry. Even this, however, will not bear well in autumn if it is allowed to fruit in June.

Recent investigations show that the time of blooming is dependent upon hours of sunlight, and that the possibility of the successful cultivation of many plants is determined by sunlight as much as by temperature.

Wheat will not grow in the tropics, no matter what the climate, for it needs the long hours of sunlight of a northern latitude to bring it into bloom.

Our northern lawn grasses are impossible there too for the same reason.

Ragweed does not grow in Maine for the unaccustomed sunlight there forces it into such vigorous growth that it does not ripen seed before it is cut off by frost.

The pæony, which blooms just before the maximum light day, could not be hastened by planting in a greenhouse, unless it were given electric light. All the flowers which are commonly grown under glass, such as roses and carnations, are probably tropical or semi-tropical in their origin and hence do not demand fifteen or sixteen hours of sunlight, but bloom when there are twelve or under. This is probably why our greenhouses are best at about the time of the vernal equinox. The chrysanthemum doubtless needs the long hours of a northern summer for its growth in preparation for blooming, which occurs with diminishing hours of light.

The cultivated violet is doubtless of Mediterranean origin and blooms here in Winter (New York is in the latitude of Naples) at its appointed time, the glass of the cold frame serving only to create an early spring temperature.

No matter how things may be delayed in early

spring by unseasonable weather or by deep snow, the time table is re-established by the end of May and all goes smoothly by schedule after that.

Hours of sunlight may well have a similar influence on the growth of trees and shrubs and explain why the northern spruces grow badly south of New York and why the sweet gum stops at the southern point of Connecticut. A sudden stopping of the northward progress of a species is not so strange as it appears when we consider the slowly rising curve of daylight hours as we go north from the tropics and its rapid increase at a critical point.

It would be interesting to know if the alpine plants of northern Europe could be grown on Mt. Kenia in Africa, which has at its peak a northern temperature with an equatorial sun.

In all of our country, which has been under the glacier, there is a characteristic topography or shaping of the surface which has been softened and modelled in the easy curves of water flowing through ice caverns or in fine gravel. It has left many accidental features not found beyond the range of the glacier. Our lake districts, our swamps, our gravelly beaches and spits of sand

stretching into the sea are all glacial accidents. Where the old mountains remain they have been ground down, smoothed, rounded and sprinkled with boulders. The trail of the glacier is everywhere to be seen, no less on the granite hills than in the drumlins and eskers. A glaciated landscape has a charm of its own which has a value to many people even in its slightest details. On almost any country place there are features of rock or hill which may be left or may be changed. I sometimes think that if the owner understood the conditions better he might not be so quick to change them, and might conceivably be willing to leave some of the boulders and some of the bare ledges with their plants as he found them. To blast the boulders and cover the ledges with lawn does not as a rule "improve" the place in the opinion of people who know something of outdoor things.

A swamp, which is always due to some glacial dam of gravel, may be filled or drained or made a lake, and it is quite within the rights of any owner to decide which, yet I would for myself like to keep the swamps, for they are worlds of their own where special conditions have brought about a delicate balance of life in interesting association. The

sound of the hylas in the spring, the bull frogs later in the season, and the darting trout showing their speckled sides, if by good fortune a brook runs through; the turtles and the musk rats, are not the least of their charms, which are different with every day and keep us in touch with the seasons. From the first changing color of a blueberry bush, the first autumn mist, and the first sheen of glassy ice through the long winter when one may make adventurous explorations on the frozen surface and perhaps cut through to see what goes on below, the swamp is full of interest, of lovely color and appealing forms. Nowhere does one see nature in such opulent luxuriance of growth, and nowhere do conditions of soil and moisture seem so perfect.

If the swamp be dug out or flooded to make a lake or drained, we lose all this and gain perhaps a charming sheet of water or a delightful green swale. Perhaps some compromise can be attempted so that we can keep some of the swamp and have lake and swale besides, but any change in water level in the swamp will quickly change its growth. If the level is raised the grasses, button bush, clethra, blueberry and other shrubs will perish and the place will become a pond of more

or less usefullness. If the water level be lowered many seedling trees will begin to appear and finally change the place into a dense wood. A large swamp which is impenetrable in summer should certainly be broken into by ponds and grassy swales. The handling of such a problem is not easy, and is like that of the salt marsh which is such a balanced relation of plants and of soil, moisture and salt water that its alteration can only be undertaken with a certainty of considerable expense and many disappointments. It is better to leave it in its natural state and enjoy its great and singular beauties as they are.

Much can be done with the salt marsh, as with the fresh water swamp, to add to the variety of its borders by planting the things which will endure such hardship. Sea lavender in the marsh is no less lovely than in the garden and we can have also the mallow, groundsel and others, remembering always that we cannot make a garden of it, must not attempt to change it, but are adding only the things which might well have been found there when we came, except for some accident.

In the fresh water swamp conditions are easier if the water level can be held through the summer

without much change, for a few loads of earth will make an island on which an entirely different flora can be grown. We should be able, with such a happy start, to grow all the bog and swamp plants, all the ericacious plants and all the flowers of our district, but the interest is more scientific than æsthetic and more sentimental than sensuous. If we are trying only to heighten an effect already existing, or to produce one which might conceivably exist in nature, we are engaged in a worthy enterprise, requiring much skill, great feeling for the aspects of natural things, and something of the laboratory method of the scientist, but it has little to do with art, no matter how gratifying to the sensibilities the result may be, unless it be studied wholly as an exercise in the composition of a natural scene to produce an emotion of beauty.

This is the dilemma which always must be faced. The scientific interest is absorbing, and there are few who would not enjoy its experiments and its victories, but this must not blind us to the fact that success in this field has nothing to do with success in producing an emotion of beauty, but rather militates against it. If our scientific interest be slight we are likely to be least hampered in realiz-

ing our creative desires. If we aim only to produce beauty we will use the simplest means and the commonest materials which are ready to hand, attaining at once in this way a unity of spirit which the scientific interest would probably lose in the diversity of experiments.

It is this failure to realize that we can only walk on one path at a time, which makes so many so-called wild gardens look like wild men's gardens. The term is a misnomer anyway and should be abandoned in favor of a better one—the ecological trial ground, or as I prefer it, “a sketch for a composition in occult balance.” There is little that is wild about most wild gardens. They have too often every appearance of cultivation of the soil and neglect of the imagination, which appears weedy and unkempt.

If it is to be done it might best be done as a trial composition or if the scientific end be most valued, as a trial in plant associations or ecology which, as I have said, is replacing to a great extent the old systematic botany. Some knowledge of ecology like knowledge of geology increases our delight in outdoor things and in travel. From car window or from motor we see the flitting countryside, see

its hills, its rocks, its soil, and have an intellectual delight in recognizing the changes in its flora and sylva. We know when we should see rhododendron and when lupins and bearberry and the pitch pine and what plant we shall find under the hemlocks. Ecologists are beginning to tell us that under given conditions of topography, soil, moisture, exposure, rainfall and wind, we shall find growing together certain plants. Everyone knows that the flora of the Adirondack Mountain peaks is different from that of the great plains. The ecologist is trying to study all the associations of plants in intermediate environments. He will, I feel sure, make things much easier for the gardener, for he will show us how to insure success in our planting of things which are too often doomed to failure because of conditions unperceived by us but obvious to him. We know that the seacoast is difficult for many plants, such as the sugar maple or hemlock, and that the tamarix and beach plum flower there. We should also know as much of other soils and situations.

Our choice of material heretofore has been too much without method. We have planted a lot of things hoping that among them some would

flourish. In future we should be able to go at it with more certainty of success, knowing that if it is a spot for kalmia, it will do well there and give us the sensuous pleasure of thrifty growth.

It is not impossible, though it requires much taste and feeling, to maintain or improve a natural slope covered with huckleberries, laurel, ferns and arbutus. To create such a charming native scene is for unknown reasons a considerable undertaking. It has seldom been done, yet what could be more worthy of the skill of an horticulturalist with ecological interests?

There are four varieties of huckleberry, including the rare and charming box huckleberry; sixteen varieties of the blueberry family; the winter-green, arbutus—altogether sixty or so varieties of ericacious plants, besides all the wood orchids, the pyrolas, troutlilies, trilliums, blood root and other charming things. If these can be grown they can easily be grouped and planned to form an entrancing composition in occult balance. It would be much finer than a Japanese garden, for that must always appear childish to Western eyes which are struck only by its cunning dwarfs, its neatness, and miss entirely the rigid symbolism. Every stone has

a meaning and every bush some function in the literary ensemble. But to us it looks like a jumble, a compendium, and is uneasy and lacking in unity and grace. There is little excuse for reproducing a Japanese garden here, but there is every reason for creating an ecological study in occult balance, for it might well raise our standards in horticulture, our enjoyment of natural scenery and stimulate our æsthetic sense.

Collecting wild plants from the pastures and the roadsides is a delightful occupation, which gives an additional interest to motoring. Most plants if dug carefully with a considerable ball of earth, and kept out of the wind while being transported, will grow well. There is no way so satisfactory to get the material for an indigenous or, we should say, typically local garden.

The habit of collecting often arouses the natives, and should be pursued considerately, for the hordes of motorists if allowed would quickly strip a field near the highway of all its kalmia. Collecting kalmia without the permission of the owner is, in Connecticut, an offense to be punished by a fine of twenty-five dollars.

Collecting on a large scale may be profitable if

we have a large area to plant; but for a few plants it is always better to go to the nurseries, for the labor of collecting may come to more than the cost of the plants.

I have never been sympathetic toward the attempt to restrict picking wild flowers or collecting plants, for the pickers of wild flowers operate mostly only near the highway and can have little effect on the total number of plants, and the commercial collectors will soon, if they do not now, take measures to insure production on the collecting grounds. The skill of our propagators aided by the ecologists will soon make it possible to propagate anything, even the arbutus which has in the past been almost impossible.

In all our work of rejuvenation, of enhancement, of control of nature, we must keep constantly in mind our single purpose, which is the enjoyment of landscape and the attempt to make that enjoyment greater. Country scenes appear to be peculiarly stimulating to our spirits, perhaps because we live more in cities, perhaps because the combat with nature is less than it used to be, perhaps because we know more about it. At any rate such enjoyment is modern and largely due to the

romanticism of the eighteenth and early nineteenth centuries. The pathetic fallacy that nature smiles or weeps with man served the needs of their sensibilities but is now a thing of the past. It may shock us that the sun should shine when we are weeping but we know it happens so and forget to weep or forget the sunshine. Following romanticism and its sentimental attitude came a more scientific frame of mind and we were impressed by the importance of little things and the essential equality of all natural events and features so that we wondered at the beauty of a snow crystal as at the rainbow and felt pity for the fly caught in the web. The details of a shell, the unfolding fronds of a fern, were thought beautiful and worthy of study. There was next, as it seems to me, a utilitarian virtue given to many things. The pine tree which gives us such useful boards, turpentine, rosin and match sticks when dead, gives shade, protection, and holds in the rich humus below it moisture for our streams, on which depends our ability to make boards and match sticks. The pine tree, thus, becomes man's chief friend and must be respected, cherished, almost worshipped. It becomes for the lowest reasons a precious thing. These thoughts

soon give rise to a sort of abstract veneration for all nature so that any part is of equal importance and we think for a time rather kindly of the snake and the mosquito. This tends to make us regard natural beauty in the same light—anything that is natural is, therefore, beautiful; but it is at this point that the artist revolts. For, indeed, no beauty exists except as we perceive it since it is only our thinking so that makes a thing beautiful. It is not a quality of things but a perception, an emotion of our own. So when people say to me of any object or scene, "Is it not beautiful?" I am tempted to ask, "Is it?" and "Why?" Probably it is, for most living things have all the kinæsthetic, tactile, and color qualities necessary to arouse in us under proper conditions an emotion of beauty. But they are not always unfailingly capable of this for the conditions of their environment, that is their relation to other things and to us, may change.

Is the pine tree beautiful? It may be in its mountain fastness, with its wind blown branches reaching for the sky, an appealing object, but that same tree somewhere else might leave us comparatively unmoved, however perfect as a specimen.



A SNOW BARRIER OF SHRUBS

The artist is critical of natural scenes and objects and other people should be more so, for as Denman Ross says, the greatest pleasure in life is to be able to recognize the best. What is it then that is best in natural scenery? We may say at the start that there may be several bests, each suiting the peculiar subconscious and intellectual equipment of people equally well trained in seeing.

It is not a question of other emotion such as may be aroused by the force of wind and wave or the dynamic quality of mountains. These, it is true, fill us with awe and we are speechless before them, and may retreat rather than face them.

It is the scene which, by its abiding charm, its power to arouse in us the emotion of beauty and to which we return again and again for refreshment rather than intoxication, which interests us most. It may be that perfection in such a landscape has never yet been reached, except in pictures, and my moderate travels have not brought me to anything which I thought supreme and unparalleled, but I am sure that the acme when found will be cultivated and not wild. I know, though I have never really seen it, what untamed nature looks like in the East. How many of the lovers of the

wild have seen it? There is little primitive nature left here. When they speak of woods do they mean the woods through which the Indians roamed, (and how much did this roaming change their character?) or the woods of today which have been cut over, changed in their silva and show in varying degrees to the observing eye the organizing power and the hand of man? The loveliest scenes which I know have been so altered by man's interference that it seems almost as if his interference were necessary to produce a beautiful landscape. It is sometimes thought by the romantic that evidences of man's occupation destroy the wildness of a scene and in the degree of his occupancy its beauty, but this can be shown to be a fallacy. Is the Temple of Neptune at Pæstum a blot? Does it not add something to the scene?

A lighthouse is a guide post for trade and speaks of cargoes of hides and oil and canned beef, but does it not enhance the wildness of the rocky wind-swept point on which it stands? And may it not also add to its beauty? Never have there been such ports of beauty as Claude's Embarkation of the Queen of Sheba or Cleopatra at Tarsus.

I have been on successive summers to the Adi-

rondacks and to the White Mountains. The Adirondacks (Placid) are forested to the top. The form of the ground is hidden and one sees only the soft tops of trees. This density of forest growth is repellent—one looks at it and is baffled by its uniformity in color and texture and its lack of detail which the imagination can grasp and hold for a time to enjoy. Undeniably there are fine moments. One finds here as everywhere in hilly country the thrill of blue. We look at the distance and with a start and a gasp of pleased surprise see that it is blue. But the wooded hills are essentially dull. In the White Mountains I know only Chocorua which rises in bald majesty against the sky. From whatever distance it has an appeal to the imagination, for its shape seems to mean something and has some interest greater than that of massed tree tops. Squam Lake, from which it is best seen, has a greater charm than a wild mountain lake, for much of the hills surrounding it are bare to the summit. One of them, I remember, rose quite steeply from the water and was dotted with boulders, with small canoe birches and with blueberries and one could see the clear cut outline of the hill against the sky and as the light changed the hill itself revealed its

subtly moulded form, so that what at first appeared a simply curved surface became full of delicate warpings and changes, stimulating the eye to agreeable movement and suggesting to the imagination infinite possibilities in organization to fit the needs of our feelings which seem to demand balance, harmony and rhythm.

I have seen recently the valley of the Chenango River, a rich well-watered farm and dairy country of an appealing delicacy. It has interested me to trace roughly the lines of farms which seem to start at the highroad, run straight back along the river plain and up and over the hills. A cultivated farm might adjoin one which had its wood lot on that side so that there was a straight, strong line of the woods edge running over the hill. This might seem to the wild-loving people a blemish but it served to emphasize and make clear the shape of the hill and it gave the eye something to follow and to hold. The pastures here are everywhere dotted with maple trees, with small thorn trees and with shrubs, all of which serve to indicate the size of things by comparison and again to attract the eye.

In a wooded country we could not see the hills

nor could we see the stream in its moving, sweeping lines as it passes through the valley.

There is in a place in Lancaster County a row of Carolina poplars, tall, spindling trees, set close together and possibly a mile and a half long. The Lincoln Highway cuts through this row at the middle and at right angles. One sees the line of trees and the opening and holds to it from afar and as one passes through it seems a gateway, as if one had entered a stockade. It is a thing without any reason that I could discover. Just a row of trees, but how important to us who are thrilled by the beauties of landscape to have that straight strong line running across our path!

It is difficult to understand why the lover of the wild who preaches conservation for quite mercenary reasons does not like the farm which is so much more productive. Yet artists have always preferred the farm with its square fields, its straight rows of trees, its changing crops and close clipped meadows and pastures.

In the forest itself few are happy and many get there that uncontrollable fear of the great God Pan which we call by his name Panic. I am not blind to the beauty of the Cathedral isles of the pine or

hemlock woods, and I enjoy them as I do being in a real cathedral, but it is not all of life and beauty. I have known fairer places. One, a springy spot on a hillside where sugar maples grow, their straight trunks rising high in the air before branching. Beneath, soft, rich and closely grazed turf, boulders, ferns in thick beds, mountain laurel, mossy spots and a view of the far horizon. Below was the rich valley spread like a carpet at our feet and decorated in a pattern never to be exhausted, with farms, fields of grain ripening, meadows cut and uncut and with the hay in cocks, woods, corn-fields, a road leading to the distant orchards and rows of trees, with here and there an elm on the flat bottom. In such a place might one not see Apollo himself?

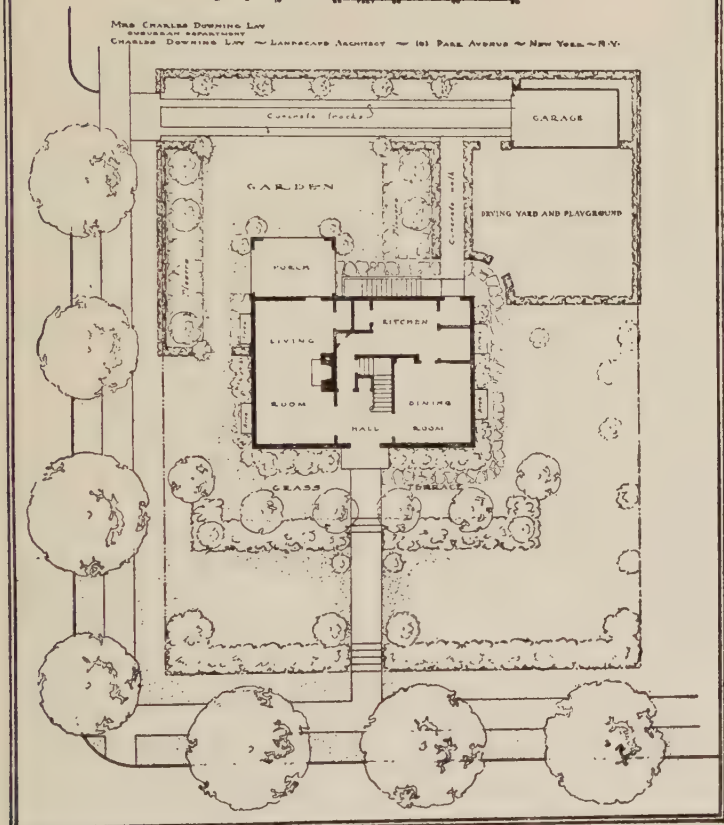
It is on the seashore that we get closest to untouched nature, for the rocky coast may be what it has been and always will be, but though the sea is destructive it still seems an agency of organization for it batters down pinnacles eroded by wind and rain; it smoothes and polishes hard rocks. It covers with a delicately modelled surface of sand all within its reach. The rhythmic curves of the

GENERAL PLAN
TRIBUNE HOUSE No 77.

SCALE 1/8" = 1'-0"

10.24.27

MRS CHARLES DUNNING LAY
SUBURBAN RESIDENT
CHARLES DUNNING LAY ~ LANDSCAPE ARCHITECT ~ 181 PARK AVENUE ~ NEW YORK ~ N.Y.



A SMALL SUBURBAN PLACE

shore line, the sweep of its marshes, and the piled hillocks of sand in its dunes, have a certain wildness of wind and wave but they are essentially organized far beyond the point of the Alps and even in the Alps the subjection of wildness is underway. It is the last stand of earth against the organizing forces of air and water. It is inspiring, stimulating, perhaps beautiful, though in a limited way. Does not the fact that no great artists have been inspired to paint alpine scenery show that something is lacking there?

Lakes, of course, are temporary, youthful features, soon to be filled up, created by the accidents of the glacier, volcano or alluvial stream. They are in themselves civilized and only acquire wildness through their surroundings. If their shores be cultivated they become the quiet part of a highly developed and emotionally exciting landscape. They may suffer from drought and they represent life in embryo. They are not yet living but may be at any time.

Tidal waters have more lasting charm than lakes. No drought disturbs them and they can change little in flora for they are flooded with salt water

at every high tide and only those plants which can endure such flooding grow there. The flowing tides following the moon give us always the feeling of a living thing.

Our Palisades are beautiful but they are not too wild. They have the smooth Hudson always beside them and their top has been planed off by the glacier, the talus at their foot is uniform in height and of an even slope as if some engineer had built it for a railway embankment.

Much of our scenery is essentially dull and can never be made anything else. It is dull in its flatness, in its silva, in all the features which together make a landscape beautiful. It can only be redeemed in small spots by great care in nurturing some and sacrificing other features. For this great feeling for the particular scene is necessary.

Buildings, I think, will never be absent from the view which approaches perfection. The sentiment connected with them is pleasing and not to be neglected. Their color is a relief to eyes wearied by green and their strong forms are a pleasing contrast with the too soft herbage.

In many parts of the East the fences, the crops

and the woodlots seem to be the making of the landscape, which without them would be dull.

It is a mistake to believe that interest in a wild life indicates any considerable appreciation of natural beauty. I think the wild life people delight in the sensual facts of life in the open but care little for what they see. They enjoy the fragrant breezes, the bodily comfort of outdoor dress, and may have some emotional thrill at the sight of dark forests or of wide spaces.

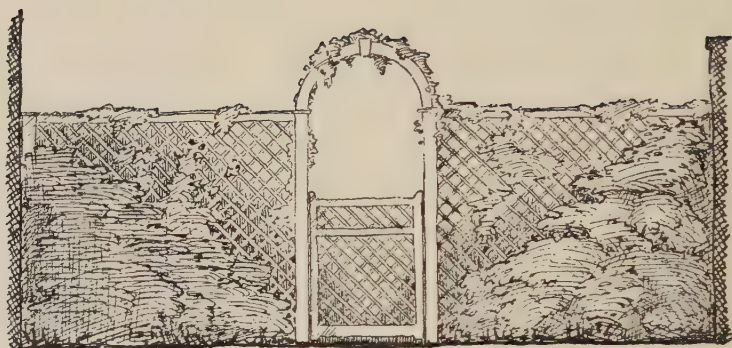
We have done too little to enhance the great beauties which we have, and must in future, if a scene is to be preserved for public enjoyment, do something more than let it alone, and have it perhaps grow into forest.

I have often wondered if the loveliest scenes may not be those where man has been civilized longest, but that cannot be if it should be found that the Mayas lived longer in their jungle than the Egyptians on the Nile, for the jungle is ever a thing of today, always new and always the same. The desert or the temperate land is old and must inevitably show the marks of time and of use.

Would we ever tire of Greece, of Rome, of

France or England with their cultivation, their use, their plain showing of the organizing hand of man? We object to the scars which our intense use inflicts, yet I can believe that an aged railroad bed may have the interest of an old lake bench or of a sand dune, and a quarry in time become a grotto where nymphs may dwell.

USEFUL TREES, SHRUBS
AND PLANTS.



USEFUL TREES, SHRUBS AND PLANTS.*

T.—Tree. S.—Shrub. H.—Herb.
V.—Vine. D.—Dwarf.

S. *Abelia*. See p. 202.

S. *Acer ginnala*. Amur Maple. April. A small tree with pale yellow, fragrant flowers. The autumn color, a brilliant scarlet, comes early and the leaves soon drop. Otherwise a commonplace specimen.

T. *A. palmatum*. Japanese Maple. Many varieties with cut leaves or with red leaves. The type which has green leaves is the best and is a handsome small tree, always distinguished in appearance.

T. *A. pennsylvanicum*. Striped Maple. Upright, dense habit, yellow-green bark. Should be useful on a small place or in a

*Some of these descriptions are rewritten from the "Check-list of Plants Mentioned in the Arnold Arboretum Bulletins," published in "Landscape Architecture," October, 1919, by C. D. Lay and R. Wheelwright.

garden, but it is not often planted. It is a tree of character.

A. rubrum. See p. 130.

A. saccharum. See p. 130, 140.

T. A. spicatum. Mountain Maple. April. Shrub or small tree. Long erect racemes of yellow flowers. Should be useful in the same way as the striped maple.

S. A. tataricum. Tartarian Maple. April. Flowers white in erect clusters; the scarlet wings of fruit in summer remain long. Shrub which might be used also as a small standard tree.

T. Æsculus hippocastancum. Horsechestnut. See p. 145.

H. Ajuga genevensis, Geneva Bugle. See p. 205.

H. A. reptans. Carpet Bugle. See p. 205.

T. Amelanchier canadensis. Downy Shadblow. May. Larger than A. laevis. Easily distinguished by coat of fine down which covers the lower surface of the leaves which are first silvery, never red. Becomes a handsome small tree 25 ft. or so high. Suitable for use in the garden. See p. 133.

- S. *A. laevis*, Allegheny Shadblow. May. Easily distinguished by red color of unfolding leaves.
- S. *A. oblongifolia*, Thicket Shadblow. May. Always a shrub. See p. 188.
Border of swamps. The shadblows are a striking feature of our countryside in spring and should always be planted in woods and thickets.
- S. *Amorpha canescens*, Leadplant. July. Middle West. Small violet colored flowers, crowded in clustered terminal spikes. Leaves and stems whitened with hoary down.
- V. *Ampelopsis*. See p. 207.
- T. Apple. See p. 143.
- S. *Aronia arbutifolia*, Red Chokeberry. Tall, slender, irregular. Scarlet fruits remaining well into winter. Scarlet leaves in autumn when it is showiest of all N. A. shrubs. Forms thickets, but is an agreeable shrub at all seasons. See p. 188.
- S. *A. atropurpurea*, Purple Chokeberry. Tall, erect shrub. Fruit dark vinous red,

ripens and falls early. Leaves turn orange and red.

- S. *A. melanocarpa*, Black Chokeberry. The chokeberries are indispensable, because of their shiny dark green foliage, their autumn color, fruit, and tree-like branching which is pleasing in winter. See p. 188.

- V. *Arctostaphylos*, Bearberry. See p. 201.

- H. Asters. See p. 47.

Autumn flowers. See list p. 49.

Autumn planting. See p. 72.

- S. Azalea. See p. 180.

- S. *A. arborescens*, Sweet Azalea. Tall shrub. Leaves dark and shining above and pale below. Clusters of large white flowers with bright red filaments, after the leaves. See p. 188.

- S. *Azalea calendulacea*, Flame Azalea. Flame-colored Azalea. Most showy. See p. 189.

- S. *A. canescens*, Piedmont Azalea. Pink flowers. Takes kindly to cultivation. See p. 189.

- S. *A. nudiflora*, Pinxterbloom. Opens before or with the unfolding of the leaves. Pale rose or pink flowers. See p. 189.

- S. *Azalea vaseyi*, Pinkshell Azalea. First species to bloom. Tall shrub. Slender stems and an open irregular habit. Flowers before the leaves in small compact clusters, pure pink. Should be planted in a considerable mass and against a background of green, as the flowers, though plentiful, do not cover the plant and look thin, the growth of the bush itself not being dense. See p. 189.
- S. *A. viscosa*, Swamp Azalea. White flowers. Blooms late. Unhappy except in moist ground or swamp.
All Azaleas are ericacious plants and must have the acid of decaying leaves to make them grow well. See p. 189.
- S. *Baccharis halimifolia*, Groundselbush. See p. 236.
- S. *Benzoin aestivale*, Spice Bush. April. The earliest native shrub to bloom. Its yellow flowers are not striking but are pleasing in the spring landscape. Leaves fragrant, uninjured by insects, turn bright yellow; small bright red fruits. Neat and pleasing in habit. Its fragrant

leaves bring at once memories of moist woods in spring. It should have fertile soil as it does poorly on a dry ledge. See p. 189.

- D. *Berberis amurensis japonica*. Hakodate Barberry. Medium size; large pale yellow flowers in long clusters; large thick leaves turning orange and red; showy fruit. To be used with discretion in places where its exotic appearance will be forgiven.
- S. *B. diaphana*, Kansu Barberry. Exceptional value. Low, round shrub; solitary pale yellow flowers; large red fruit turns brilliant scarlet.
- S. *Berberis dictophylla*, Chalk Leaf Barberry. China. Tall shrub; slender, erect stems; small, shiny leaves, light green above, silver white below, upper side of leaves turn scarlet; red fruit; perfectly hardy.
- S. *B. sieboldi*, Siebold Barberry. Japan. Leaves hardly surpassed in brightness of scarlet.

The Barberries above are all more interesting than the Japanese Barberry. All

are wholly exotic and suffer in our summer droughts. They must be used with discretion or they will spoil a native landscape.

- S. *B. thunbergi*, Japanese Barberry. Ubiquitous, but useful for hedges and handsome in fruit.
- S. *B. verruculosa*, Warty Barberry. Promises to be a valuable evergreen but I know it only in small specimens.
- T. *Betula*, Birch. See p. 138.
- V. *Bignonia*, Trumpet creeper. See p. 208.
- T. *Broussonetia papyrifera*, Paper Mulberry. Rapid growing, small tree which endures city conditions well but is not absolutely hardy in New York. It should be used more often as a street tree, or for formal planting.

Bulbs. See p. 99.

- S. *Buxus*, Box. See p. 180.
- S. *Calluna*, Heather. See p. 181.
- Calocortus*, Mariposa. See p. 102.
- S. *Calycanthus floridus*, Sweetbush. Often found in old gardens. Dark red, stiff flowers,

which have the fragrance of strawberries.

- T. *Carpinus caroliniana*, American Hornbeam. Small tree, often forming a low, dense, rounded head. Dark green foliage, changing to scarlet or orange. Suitable for the garden or for formal planting. Lovely in the winter because of its smoothly modelled bark, interesting branching and delicate twiggy head. See p. 134.
- S. *Caryopteris*, Bluebeard. See p. 50.
- S. *Chamaedaphne calyculata*, Leatherleaf. See p. 181.
- S. *Ceanothus americanus*, Jersey Tea. A small shrub with white flowers, useful because it remains small.
- T. *Celtis occidentalis*, Hackberry. A tree of considerable value at the shore as it will grow in the sand with cedar, bay and ailanthus. It is nowhere a particularly pleasing tree.
- V. *Celastrus*, Bittersweet. See p. 209.
- Cercidiphyllum japonicum*. Kadsura Tree. See p. 146.

- T. *Cercis canadensis*, American Redbud. The small axillary flowers appear before the leaves and are a charming rose pink. Old specimens are sometimes found with a trunk eight or ten inches in diameter. p. 133-189.
- T. *C. chinensis*, Chinese Redbud. Flowers are said to be more beautiful than *C. canadensis*.
- T. *Cladrastis lutea*, Yellowwood. See p. 146.
- S. *Clethra acuminata*. Summer Sweet. July. Useful in many places but commonly found in moist ground. Fragrant, white flowers in midsummer. Good foliage and good habit.
- S. *Comptonia asplenifolia*, Sweetfern. A low, fragrant leaved shrub of the pastures.
- S. *Cornus alba*, Tartarian Dogwood. June. A ragged sort of shrub with brilliant red branches.
- T. *C. alternifolia*, Pagoda Dogwood. Good small tree, sometimes short lived.
- S. *C. amomum*, Silky Dogwood. Small white flowers; not satisfactory unless it has plenty of room; needs circle of 25 feet.

Bright blue fruit in autumn; purple stems.

- H. *Cornus canadensis*, Bunchberry. See p. 205.
- T. *C. florida*, Flowering Dogwood. Handsomest of all flowering trees. See p. 134-167.
- T. *C. florida rubra*, Pink Flowering Dogwood. Better than a Japanese cherry.
- S. *C. mas*, Cornelian Cherry. Europe. Bright yellow flowers in dense clusters, coming a little before our spice bush. Foliage good. Bright scarlet lustrous fruit. A small sized tree, which might be used in formal work. See p. 136.
- S. *C. paniculata*, Gray Dogwood. Round-headed; free-flowering; creamy white flowers; white berries; leaves turn dark red. One never wearies of its various charms. See p. 189.
- S. *C. rugosa*, Round-leaf Dogwood. Pale blue fruits; large leaves; green branchlets; creamy white flowers; difficult to transplant, and little known.
- S. *C. sanguinea*, Blood-twigg Dogwood. S. Europe. Small flat flower clusters; black fruit; red branches.

- S. *C. stolonifera*, Red Osier Dogwood. E.N.A.
White fruit.
- S. *Cotoneaster*. The *Cotoneasters* are rather new and not well known. Some are a little crab like; long waving branches without many leaves. *C. horizontalis* is nearly evergreen and when covered with red berries is a charming thing. I think they will all endure a long drought. The small flowers, often red or pink on the outside, come in May or early June and are as charming as the fruit.
- S. *C. acutifolia*, Peking *Cotoneaster*. Black fruit.
- S. *C. adpressa*, Creeping *Cotoneaster*.
- S. *Cotoneaster dielsiana*, Diels *Cotoneaster*.
Arching stems and branches; bright red fruit; small leaves turning reddish purple.
- S. *C. divaricata*, Spreading *Cotoneaster*. Dark red fruit. Leaves turn scarlet.
- S. *C. foveolata*. Black fruit; leaves turn orange and crimson.

- S. *C. francheti*, Franchet Cotoneaster. Orange red fruit.
- S. *C. frigida*, Himalayan Cotoneaster.
- D. *C. horizontalis*, Rock Cotoneaster. A striking and handsome low shrub, forming mat one foot high; small leaves, dark and lustrous; small red fruit. Nearly evergreen. Planted among rocks it seems to hug them like a juniper. See p. 181-202.
- S. *C. hupehensis*, Hupe Cotoneaster. Strong, shrubby; white flowers, crimson fruit.
- S. *C. moupinensis*, Mupin Cotoneaster. Black fruit; brilliant autumn color.
- D. *C. microphylla*, Rockspray.
- S. *C. simonsi*, Simons Cotoneaster.
- S. *C. zabeli*, Zabel's Cotoneaster. Graceful habit, dark red fruit.
- T. *Crataegus*. The Hawthornes are a large and interesting family, varying greatly in size, habit, fruit and foliage. They are not difficult to transplant and should be collected locally. We should be able to

buy the shrubby forms which are not now on the market, and we should use all the varieties more frequently. Probably a pink flowered form of an American variety will some day be discovered. The English hawthorne is not so good a tree as it is more sprawly and less compact under ordinary conditions. See p. 134.

- T. *Crataegus arnoldiana*, Arnold Hawthorne. Fruit ripens in August; strong zigzag branches.
- T. *C. carrieri*, Carrier Hawthorne. Thick-pointed lustrous leaves; large orange-red fruits; ornamental plant of the first class.
- T. *C. coccinea*, Thicket Hawthorne.
- T. *C. coccinioides*. Large, bushy tree; compact flower clusters; red fruit.
- T. *C. cordata*, Washington Hawthorne. S. Appalachian. Latest to flower; leaves turn orange and scarlet; best in winter; small scarlet fruit lasting until spring.
- T. *C. crusgalli*, Cockspur Thorn. Good variety with small shining leaves.

- T. *C. oxycantha*, English Hawthorne. Not so good as the native hawthorne. Paul's variety has red flowers.
- T. *C. persistens*. Leaves remain green after all other hawthorne leaves have fallen; crimson fruit remains late, exceptional value.
- S. *Cydonia japonica*, Flowering quince. Useful for its brilliant red flowers.
- D. *C. maulei*. Lesser flowering quince. Low, spreading; flowers crimson to white; well suited for rock garden, low banks, etc.
- D. *Daphne cneorum*, Rose Daphne. A charming low shrub, six inches high. The fragrant, pink flowers come in May and again in September.
- S. *D. genkwa*, Lilac Daphne.
- S. *D. mezereum*, February Daphne. April. Small shrub; valuable for its very early fragrant flowers, appearing with or before the leaves, and for its showy scarlet fruit.
- S. *Decodon verticillatus*, Water Willow. Maine to Florida. Shrub with arching stems

from two to three feet long, growing only in the wet borders of streams and ponds, and useful only in such a situation, where it often spreads into broad thickets. In early autumn the leaves turn bright scarlet.

- S. *Deutzia*. A rough, coarse shrub, with a suburban aspect, and white or pinkish flowers. The low *D. gracilis* and *D. lemoine* stay small and are valuable for this reason.
- S. *Diervilla sessilifolia*. Southern bush Honeysuckle. One of the shrubs which will stay small.
- S. *Dirca palustris*, Leatherwood. Small but very early and abundant yellow flowers appear before the leaves. Not conspicuous but can be depended upon to stay small.
- T. *Elaeagnus angustifolia*, Russian Olive. Small tree. Small, pale yellow, fragrant axillary flowers are almost hidden by the leaves. These are long and narrow like those of some Willows, and they are silvery white, retaining this color during

the season. Good in the city or near the sea.

- S. *E. longipes*, Cherry *Elaeagnus*. July. Japan. Flowers and fruits here profusely. Fruit hangs gracefully on long slender stems and is oblong, scarlet, lustrous and covered with small, white dots; tart and rather agreeable flavor; sometimes used in cooking.
- S. *E. umbellata*, Autumn *Elaeagnus*. Similar to *E. angustifolia*. Both seem to do well close to salt water and also in city yards.
- S. *Enkianthus companulatus*, Redvein *Enkianthus*. Tall shrub. Handsomest of the three species. Slender, erect stems and branches. Light yellow or rose colored flowers. Leaves are bright scarlet color in autumn. See p. 129.
- S. *E. perulatus*, White *Enkianthus*. Small plant. Small yellow flowers. Less valuable.
- D. *Erica*, Heath. See p. 181.
- S. *Euonymus alatus*, Winged *Euonymus*. Leaves turn a clear rose-color. Large, wide-spreading, rather compact shrub with

branches furnished with broad corky ridges. Inconspicuous flowers and fruits. Ten to twelve feet in diameter. See p. 129.

S. *E. bungeanus*, Winterberry *Euonymus*. Small light pink fruit which is set off by the pale yellow autumn leaves.

S. *E. japonicus*, Evergreen Burningbush. Shining evergreen leaves. Useful south of New York. See p. 182.

V. *E. radicans*. See p. 182-202-208.

S. *E. yedoensis*, Yeddo *Euonymus*. Shrub or small tree. Conspicuous for autumn color and brilliant fruits.

Evergreen Trees. See p. 148.

Evergreen Shrubs. See p. 180.

T. *Fagus*, Beech. See page 141.

Ferns. See p. 190.

S. *Forsythia intermedia*, Border *Forsythia*. Handsomest of the *Forsythias*. April.

S. *Forsythia suspensa*, Weeping *Forsythia*. Best suited for draping high walls.

S. *F. suspensa*, var. *Fortunei*, Fortune *Forsythia*. Now most generally used.

- S. *F. viridissima*, Greenstem Forsythia. Admirable in autumn for its dark, bronzy leaves.
Foxglove. See p. 65.
- S. *Fothergilla major*, Fothergilla. Leaves resembling those of the Witch Hazels turn light orange and red. Showy terminal heads of small white flowers which appear in spring before the leaves. One of our natives which should be more often grown.
- T. *Franklinia alatamaha*, Franklinia. Interesting small tree.
- T. *Fraxinus*, Ash. Valuable for timber but on the whole rather a stupid tree. I have never seen an ash which was important in the landscape. In the forest its large, straight pole is well enough.
- V. *Gaultheria procumbens*, Wintergreen. A creeping evergreen of the heather family. Requires a soil of leaf mold.
- S. *Gaylussacia*, Huckleberry. See p. 240.
- T. *Ginkgo biloba*, Maidenhair-tree. Often planted because of its erect growth. As it grows older it branches and becomes a

large, spreading tree. Useful for city planting where it can have room.

- T. *Gleditsia triacanthos*, Common Honeylocust.

Often of little value in the landscape.

Groundcovers. See p. 196.

- T. *Gymnocladus canadensis*, Kentucky Coffee Tree. Unusually bare looking in winter. In summer a canopy of foliage like the black walnut.

- T. *Halesia diptera*, Two-wing Silverbell. See p. 189.

- T. *H. monticola*, Mountain Silverbell.

- T. *H. tetraptera*, Great Silverbell.

- T. *Halimodendron halodendron*, Salt tree. Spreading branches. Small bluish leaves. Numerous pale violet flowers. Hardy. Use in sand or poor soil.

- S. *Hamamelis japonica*, Japanese Witch Hazel. February. Large vigorous and perfectly hardy shrub. Two forms, one of them blooming a few days before the other, about the middle of February. Uninjured by the severest cold. Excellent subject to plant in city yards.

- S. *H. mollis*, Chinese Witch Hazel. February.

Flowers larger than those of the other species. Petals bright yellow and remain for weeks in good condition.

- S. *H. vernalis*, Vernal Witch Hazel.
- S. *H. Virginiana*, Common Witch Hazel. October. Small cluster of flowers with long, pale yellow strap-shaped petals. Flowers seem to cover the branches and form one of the most interesting features. See p. 188.
- V. *Hedera*, Ivy. See p. 199-202.
- D. *Helianthemum*, Sunrose. See p. 202.
- S. *Hibiscus syriacus*, Shrub Althea. Commonly found in old gardens. Blooms in July but has beyond this little to recommend it.
- T. *Hicoria*, Hickory. Large handsome tree, tall cylindrical or spreading.
- S. *Hippophae rhamnoides*, Common Sea-Buckthorn. Stays green late. Orange colored, persistent fruit on female plant.
- S. *Hydrangea arborescens* var. *grandiflora*. Snowhill Hydrangea. Hardy, shapely shrub and produces large clusters of

sterile white flowers in profusion. Good habit.

- S. *H. bretschnideri*, Shaggy Hydrangea. Large shrub. First of the shrubby hydrangeas to bloom.
- S. *H. paniculata*, Panicle Hydrangea. Not to be confused with the *Hydrangea paniculata* gr. fl. This is a lovely small tree and should be used often. See p. 136.
- S. *H. petiolaris*, Climbing Hydrangea. Japan. Will grow on trees, brickwork, etc. Bright green foliage. Broad heads of white flowers. See *Schizophragma hydrangeoides*. See p. 210.
- S. *H. quercifolia*, Oakleaf Hydrangea. A lovely shrub, enduring partial shade. See p. 189.
- S. *H. radiata*, Silver leaf Hydrangea. As a foliage plant is the most striking of the American species, for the leaves which are dark blue-green on the upper surface are silvery white below. Not of great value in the garden.
- S. *H. xanthoneura*, Yellowvein Hydrangea.

Earliest to flower of all the hydrangeas which are hardy in this climate. Handsome shrub.

Hydrangeas in winter. See p. 93.

Hydrangeas on the terrace. See p. 114.

S. *Hypericum aureum*, Golden St. Johnswort.
Handsome, golden flowers in August, otherwise unattractive.

D. *H. buckleyi*, Mountain St. Johnswort. Said to be a good ground cover. See p. 202.

T. *Ilex aquifolium*, English Holly. See p. 182.

S. *I. crenata*, Japanese Holly. See p. 182.

S. *I. glabra*, Inkberry. See p. 182.

S. *Ilex laevigata*, Smooth Winterberry. Showy, as the fruit is large and bright-colored. Round headed shrub eight or ten feet across.

T. *I. opaca*, American Holly. See p. 182.

S. *I. serrata*, Finetooth Holly. Red berries.

S. *I. verticillata*, Common Winterberry. Common plant. Round-headed shrub. Bright red berries close to the stems. See p. 189.

S. *Indigofera amblyantha*, Pink Indigo. July. Slender, erect stems, small leaves and erect axillary clusters of small rose-



THE EVERGREEN SHRUBS IN WINTER

colored flowers. Appears to be perfectly hardy. Continues to produce its flower clusters until October.

V. Ivy, Boston. See p. 207.

V. Ivy, English. See p. 199.

S. *Jasminum nudiflorum*, Winter Jasmine.
Pleasing because its yellow starry blossoms appear so early. Foliage is good. It can be trained on the house or forms a rather dense, low shrub. See p. 211.

T. *Juglans nigra*, Black Walnut. See p. 145.

Juniperus virginiana. See p. 151.

Junipers, See p. 207.

Kalmia latifolia, Mountain Laurel. See p. 183.

T. *Laburnum*, Laburnum. Small trees, interesting because of their yellow flowers.

T. *Larix*, Larch. See p. 148.

S. *Ledum groenlandicum*, True Labrador Tea.
For the ericacious garden.

D. *Leiophyllum buxifolium*, Box Sand Myrtle.
For the ericacious garden.

S. *Leucothoe catesbaei*, Drooping Leucothoe.
One of our most useful broad-leaved evergreens. See p. 183.

S. *L. populifolia*. For the ericacious garden.

- S. *L. racemosa*, Sweetbells. For the ericacious garden.
- S. *Ligustrum amurense*, Amur Privet. The branches terminate with large flower clusters. Pyramidal habit. Tall shrub with erect stems which form a narrow head. Hardier than *L. ovalifolium*.
- S. *L. ibota*, Ibota Privet. Asia. Broad shrub sometimes ten feet high, with spreading, slightly recurved branches, small dark green leaves which turn purplish in autumn. Short nodding clusters of small, purplish black fruit covered with a pale bloom.
- S. *L. ibota* var. *regelianum*. Lower and denser shrub. Horizontally spreading branches which form a broad flat-topped head. Seedlings of the variety are often identical with *L. ibota*. Can be used for low hedges.
- S. *L. vulgare*, European Privet. Tall, broad, shapely shrub with dark green leaves. Covered with small, erect, terminal clusters of white, bad smelling flowers.

Much used as a hedge-plant. Green into December. See p. 218.

Lilies. See list p. 192.

T. *Liquidambar styraciflua*, Sweet Gum. Grows as far north as southern Connecticut. See p. 143.

T. *Liriodendron tulipifera*, Tulip Tree. A handsome tree of the largest size. Tall and cylindrical, but picturesque in shape. The starry seed pods are more conspicuous than the flowers. Autumn color light yellow. Should be transplanted in spring.

S. *Lonicera fragrantissima*, Winter Honeysuckle. Hardy. Fragrant flowers in early spring before leaves appear. Leaves green until November.

V. *Lonicera halliana*, Hall Honeysuckle. See p. 200-209.

V. *L. henryi*, Henry Honeysuckle. See p. 200.

S. *L. ledebouri*. Long slender flowers are bright yellow, tinged with red. Surrounded by large, leaf-like dark red cups which remain under the large, black lustrous fruit. Leaves green until November.

- S. *L. standishi*, Standish Honeysuckle. Hardy shrub. Fragrant flowers in early spring before the leaves appear. Leaves green until November.
- V. *Lycium chinense*, Chinese Matrimony Vine.
- S. *Lyonia ligustrina*, He-Huckleberry. Bright scarlet leaves in autumn. See p. 189.
- Lysimachia nummularia*. See p. 205.
- T. *Maclura pomifera*, Osage Orange. See p. 137.
- T. *Magnolia acuminata*, Cucumber Tree. Large tree with small, yellow green, not very conspicuous flowers. Hardy, fast-growing tree of rather formal pyramidal habit.
- T. *M. conspicua*, Yulan Magnolia.
- T. *M. glauca*, Sweetbay. See p. 183.
- T. *M. grandiflora*, Southern Magnolia. The evergreen magnolia which is so common in Washington and south.
- T. *M. macrophylla*, Big Leaf Magnolia.
- T. *M. soulangeana*. The magnolia most commonly planted and a glorious sight when in bloom.

- T. *M. stellata*, Star Magnolia. White flowers. One form has pink flowers. Perfectly hardy, usually free-flowering and very desirable small tree.
- S. *Mahonia*, Hollygrape. See p. 183.
- D. *M. repens*, Creeping Hollygrape. See p. 203.
- T. *Malus baccata*, Siberian Crab. Tall, narrow tree with white flowers on long, drooping stems and yellow fruits not much larger than peas. Hardy and handsome tree.
- T. *Malus coronaria*, Wild Sweet Crab. A small tree with clusters of flowers on long stems. The most deliciously fragrant of all flowers. Blooms a week or so later than the cultivated apple.
- T. *M. floribunda*, Japanese Flowering Crab. As it reaches maturity it assumes a picturesque habit. Broad shrub with a trunk divided at the base into several large stems. Pink flowers which are deep rose-color in the bud, turn white before the petals fall and are produced in the greatest profusion. Dark green foliage. Yellow or orange-colored fruits, which are not much larger than peas.

- T. *M. halliana*, Hall Crab. China. Semi-double bright pink flowers hanging gracefully on long slender stems. Small and not very vigorous tree, with dark bark, leaves tinged with purple when they first unfold. Minute fruits.
- T. *M. ioensis*, Prarie Crab.
- T. *M. ioensis*, var. Bechtel Crab. Great quantities of double, pale pink flowers which look like small clustered roses. Hardy. Last crab apple to bloom.
- T. *M. niedzwetzkyana*, Redvein Crab. Remarkable in the red color of the flowers, branches, leaves and fruit. Small tree. One of the first apples to bloom.
- T. *M. prunifolia*, rinki, Chinese Apple.
- T. *M. pulcherrima* Arnoldiana. Larger pink flowers and larger fruit than *P. floribunda*.
- S. *M. sargentii*, Sargent Crab. Low, wide bush. Excellent plant for small gardens. The only shrub apple which is now known.

- T. *M. scheideckeri*, Scheidecker Crab. Branches are erect and slightly spreading, forming a narrow pyramidal head. Pink and white flowers are produced in profusion. Yellow fruit is from three-quarters to an inch in diameter.
- T. *Malus sieboldi*, Toringo Crab. Last of the Asiatic species to flower. Small tree with spreading branches, numerous small flowers and minute fruit.
- T. *M. spectabilis*, Chinese Flowering Crab. Pyramidal habit and large pink semi-double flowers.
- T. *M. spectabilis riversi*. River's Crab. Best form.
Maritime Garden. Plant List. See p. 123.
- T. *Morus*, Mulberry. Useful, rather handsome tree, but a great nuisance when the fruit is ripe because the fruit is soft and juicy and is dropped everywhere by birds.
- S. *Myrica carolinensis*, Northern Bayberry. The bay of our coasts and pastures.
- S. *M. cerifera*, Southern Waxmyrtle.
- S. *M. gale*, Sweetgale.
Norway Spruce. See p. 75-155.

Nurseries. See p. 74.

- T. *Nyssa sylvatica*, Tupelo; Pepperidge. See p. 130-140.
- T. *Ostrya virginiana*, American Hophornbeam.
Useful but infrequently planted small tree.
- T. *Oxydendrum arboreum*, Sourwood. See p. 134.
- D. *Pachistima canbyi*. See p. 184.
Paeony. See p. 66.
- H. *Pachysandra*. See p. 197-205.
- S. *Philadelphus coronarius*, Sweet Mockorange.
Small, creamy white fragrant flowers.
Still one of the best garden plants in the genus.
- S. *P. falconeri*, Star Mockorange. Delicate white blossoms.
- S. *P. inodorus*, Scentless Mockorange. Large solitary, pure white flowers. Although little known, it is a good variety.
- S. *Philadelphus Lemoinei*, Lemoine Mockorange.
(*P. coronarius* X. *P. Microphyllus*).
Interesting and useful plants:

var. *Avalanche*

- D. “ *Boule d’Argent*
S. “ *Bouquet Blanc*
“ *Candelabre*
“ *Conquête*
“ *Fantasie*
“ *Gerbe de Neige*
D. “ *Manteau d’Hermine*
S. “ *Mont Blanc*
“ *Nuée Blanche*
S. “ *Pavillon Blanc*
H. *Phlox subulata*, Moss Phlox. See p. 206.
S. *Pieris floribunda*, Mountain Andromeda. See
p. 183.
S. *P. japonica*, Japanese Andromeda. See p. 184.
S. *P. lucida*, Fetterbush.
S. *P. mariana*, Staggerbush.
Pinus, Pine. See p. 149.
Platanus occidentalis—American Plane Tree,
p. 142.
T. *Populus*, Poplar. See p. 147.
Privet, p. 84.
T. *Prunus alleghaniensis*, Allegheny Plum.
T. *P. americana*, American Plum.
T. *P. angustifolia*, Chickasaw Plum.

- S. *P. angustifolia watsoni*, Sand Plum.
- S. *P. besseyi*, Bessey Cherry.
- S. *P. glandulosa*, Flowering Almond.
- S. *P. maritima*, Beach Plum. See p. 124.
- T. *P. nigra*, Canada Plum. Most northern of the American Plum trees. Small tree with dark, rough bark. Flowers slightly tinged with pink and becoming rose-color in fading. Valuable on account of its hardiness, early appearance of the flowers and the early ripening of the fruit.
- T. *P. orthosepala*, Kansas. Attractive when in flower. Very hardy. Handsome fruits.
- T. *Prunus pennsylvanica*, Pin Cherry.
- S. *P. pumila*, Sand Cherry.
- T. *P. serotina*, Black Cherry. Wild Cherry in text. See p. 144.
- T. *P. serrulata sachalinensis*, Yama Cherry. A large tree, charming flowers.
- S. *P. spinosa*, Blackthorn.
- T. *P. subhirtella*, Higan Cherry.
- S. *P. subhirtella pendula*, Shidare-higan. Weeping Cherry. Long, slender, pendulous branches which are covered with small

pink flowers before the leaves expand. Plants produced by grafting at the ground level grow to a larger size, and live longer.

- S. *P. tomentosa*, Nanking Cherry. Broad, vigorous shrub of excellent habit, covered with large flowers, the white petals more or less tinged with red toward the base. Small, bright red, slightly hairy fruits are of good flavor.
- S. *P. triloba*, Flowering Plum. Shrub with bright, clear pink flowers about one inch in diameter, which appear before the leaves.
- T. *Quercus alba*, White Oak. See p. 140.
- T. *Q. bicolor*, Swamp White Oak. A handsome oak. Grows in swamps but is also found on dry hilltops.
- T. *Q. coccinea*, Scarlet Oak. See p. 130. Perhaps the finest oak.
- S. *Q. ilicifolia*, Scrub Oak. See page 140.
- T. *Q. imbricaria*, Shingle Oak.
- T. *Q. laurifolia*, Laurel Oak.
- T. *Q. macrocarpa*, Mossycup Oak.
- T. *Q. marilandica*, Blackjack Oak.

- T. *Q. michauxi*, Swamp Chestnut Oak.
- T. *Q. palustris*, Pin Oak. See p. 140. Easy to transplant but not so good as the Scarlet or Black Oak.
- T. *Q. phellos*, Willow Oak.
- T. *Q. prinus*, Chestnut Oak. See p. 140.
- T. *Q. stellata*, Post Oak. See p. 139.
- T. *Q. velutina*, Black Oak.
- Retinosporas. See p. 18.
- S. *Rhamnus cathartica*, Common Buckthorn. Europe. Leaves bright and shining, and remain on the branches late. Black shining fruits. One of the best hedge plants in this climate.
- S. *R. frangula*, Glossy Buckthorn. Tall shrub. Slender, erect stems and branches. Lustrous leaves which fall in the autumn without change of color.
- D. *Rhododendron*. See p. 184.
- S. *Rhus canadensis*, Fragrant Sumac. N. A. Rather a straggling plant with slender stems, sometimes three or four feet high. Flowers are bright yellow, on short axillary branches. The leaves when crushed are fragrant.

- S. *R. copallina*, Shining Sumac. Leaves are rather more lustrous than those of the other Sumacs. Wings on the stalks. Few plants present a more brilliant appearance when the leaves turn bright scarlet.
- T. *R. cotinoides*, American Smoketree.
- T. *R. cotinus*, Common Smoketree.
- S. *R. glabra*, Smooth Sumac. Smaller than the Staghorn Sumac.
- T. *R. typhina*, Staghorn Sumac.
- S. *Ribes odoratum*, Golden Currant. Delicious fragrance but like all currants harbors the white pine blister rust and is taboo in many places.
- T. *Robinia*, Locust. Not a handsome tree but has attractive features. There should be a small grove on every place to provide fence posts.
- Rock Gardens. See p. 117.
- Rock Plants. See p. 120.
- S. *Rosa cinnamomea*, Cinnamon Rose. Charming old-fashioned rose.
- S. *R. hispida*, Scotch Rose.

- S. *R. hugonis*, Hugonis Rose. The first rose to bloom. Charming yellow flowers.
- S. *Rosa humilis*, Pasture Rose. Common Wild Rose of the interior. Low plant with dull leaves. Least ornamental of the native roses.
- S. *R. lucida*, Virginia Rose. } Both form dense
S. *R. lucida alba*. } clumps and are per-
} manent. Both are
} charming.
- S. *R. multiflora*, Japanese Rose. See p. 169-211.
A pest with many lovely features.
- S. *R. nitida*, Bristly Rose. Rather dark colored flowers. Short stem covered with bright red prickles. Always dwarf.
- S. *R. palustris*, Swamp Rose. The common rose of New England. Like the other native roses it is nearly as handsome in winter as in summer.
- S. *R. rugosa*, Rugosa Rose. See p. 169.
- S. *R. setigera*, Prairie Rose. Last rose to bloom and should be in every shrubbery. Leaves in autumn are dark bronzy colors.

- S. *R. spinosissima* var. *altaica*, Altae Rose.
Hardy. Tall white bush. Numerous
large single white flowers faintly tinged
with yellow. Appears to be valuable.
- V. *R. wichuriana*, Wichurian Rose. See p. 203.
- S. *Salix humilis*, Prairie Willow. Native shrub
with gray-green leaves. Slender red
stems make a handsome contrast with
the silvery gray flower clusters.
- S. *S. tristis*, Dwarf Pussy Willow. A spread-
ing shrub with slender stems and small
gray-green leaves. The anthers of the
male plant are bright red when they first
appear and much more showy than the
gray inflorescence of the female plant.
Grows naturally on barren soil. Spreads
into large masses. Excellent plant for
covering dry slopes.
- S. *Sambucus canadensis*, American Elder. A
handsome soft plant giving when in fruit
an impression of abundance.
- S. *S. pubens*, Scarlet Elder. Red fruit. More
interesting than the above.

- T. *Sassafras variifolium*, Sassafras. See p. 142-144.
- H. *Sedum*, See p. 206.
- S. *Shepherdia argentea*, Silver Buffalo berry.
Shrub or small tree with handsome silvery leaves. Small, handsome, crimson or yellow sub-acid fruits, ripening early in autumn.
- V. *Smilax rotundifolia*, Horsebrier. See p. 210.
- T. *Sophora japonica*, Chinese Scholartree.
Hardy tree of good habit. Dark green leaves and branchlets. Flowers late in summer, narrow, erect clusters of creamy white flowers.
- T. *S. japonica* var. *pendula*. Rarely flowers.
- T. *Sorbus americana*, American Mountain Ash.
Leaves bright shades of yellow and scarlet in autumn. Fruit remains on branches in good condition until the flocks of northern robins arrive. See p. 136.
- T. *S. aucuparia*, European Mountain Ash. More spreading and not so interesting as *S. americana*.

- S. *Spiraea prunifolia*, Bridalwreath. Handsome autumn color.
- S. *S. tomentosa*, Hardtack.
- S. *S. trilobata*, Threelobe Spiraea. Said to be better than *S. VanHouttei*.
Spring Bulbs. See list p. 102.
- S. *Stephanandra flexuosa*, Cutleaf Stephanandra. Delicate, compact, globular shrub, remaining about six feet high.
- S. *Stewartia pentagyna*, Mountain Stewartia. White cup-shaped flowers. See p. 133.
- T. *S. pseudocamellia*, Japanese Stewartia. Taller plant. Tree-like in habit. Smaller flowers. Ripening leaves dark wine-color. Small, slender tree. They are smaller than those of the two American Stewartias.
- T. *Styrax japonica*, Japanese Styrax. Pure, white cup-shaped flowers hanging gracefully down from the branches on long slender stems. Perfectly hardy in the neighborhood of Boston. See p. 136-189.
- S. *Symphoricarpos vulgaris*, Coralberry. See p. 204.

- S. *S. racemosus*, Common Snowberry.
var. *laevigatus*, Handsomest form.
- S. *Symplocos paniculata*, Sweet leaf. Small
white flowers in abundant clusters.
Small, bright, blue berries of a color not
often seen in northern gardens.
- T. *Syringa japonica*, Japanese Tree Lilac. Lus-
trous bark like that of the Cherry tree.
Wide, round-topped head. Last to
bloom and most tree-like of the Lilacs.
See p. 137.
- T. *Taxus*, Yew. See p. 207.
- H. *Thymus serpyllum*, Thyme. See p. 204.
- H. *T. vulgaris*, Thyme. See p. 204.
- T. *Tilia*, Linden. See p. 145.
- T. *Tsuga canadensis*, Hemlock. See p. 150-167.
- T. *Ulmus*, Elm. See p. 141.
- S. *Vaccinium corymbosum*, High bush Blue-
berry. White, bell-shaped flowers. The
loveliest shrub of Eastern N. America.
Habit is good. Flowers are charming
and the fruit is our best native berry.
No other plant has a more splendid
autumn color. See p. 189.
- S. *Vaccinium pallidum*, Blueridge Blueberry.

- S. *V. pennsylvanicum*, Lowbush Blueberry.
- D. *V. stamineum*, Deerberry.
- D. *V. vitisidaea*. See p. 204.
- S. *Viburnum acerifolium*, Maple leaved Viburnum. Valuable as an undershrub for it grows well in comparatively dense shade. Handsome flowers, fruit and autumn color. See p. 189.
- S. *V. alnifolium*, Hobble Bush or Moosewood of northern woods.
- S. *V. americanum*, American Cranberry Bush. So-called High-bush Cranberry. Less compact than that of the other species. Fruit translucent and very lustrous. Remains on the branches through the winter. Leaves turn bright orange-red before falling.
- S. *V. carlesi*, Fragrant Viburnum. Earliest of the Viburnums to flower. Hardy and blooms freely when not more than a foot high. Flower buds are bright red. Inner surface of the corolla is white and as the flower opens the color of the outer surface gradually fades to pink and then to white. See p. 189.

- S. *Virburnum cassinoides*, Withe-rod. June.
Native of swamps. Flowers slightly tinged with yellow. Fruit larger than that of the other species, first yellow-green, later becomes bright pink and finally blue-black with glaucous bloom. Splendid in autumn dress. See p. 189.
- S. *V. dentatum*, Arrow wood. Clusters of bright blue fruit. There are few better shrubs. See p. 189.
- S. *V. dilatatum*, Linden Viburnum. Valuable. Large shrub. Clusters of creamy white flowers. Bright red lustrous fruit.
- S. *V. lantana*, Wayfaring Tree. One of the shrubs of Western Europe which are valuable in New England. Tall, compact, round-headed shrub with large, thick, dark green leaves. Broad, compact, convex clusters of white flowers. Fruit when fully grown is bright red but finally turns black.
- S. *V. lentago*, Nannyberry. Large shrub or small round-headed tree with lustrous leaves. Sweet dark blue fruit. One of the most desirable of the shrubs of the

N. United States. Splendid in autumn dress. Large, rounded clusters of creamy white flowers. See p. 127-189.

S. *V. molle*, Kentucky Viburnum. Nearly round thick leaves on long stems. See p. 189.

S. *V. opulus*, European Cranberry bush. Flower clusters smaller than those of the American species. Larger and handsomer shrub with thicker and darker green leaves.

T. *Viburnum prunifolium*, Blackhaw. Small shapely tree of the Middle States. Leaves turn deep wine-color. See p. 136.

S. *V. pubescens*, Downy Viburnum. Shrubby, with slender stems spreading into large clumps. Small, abundant clusters of white flowers. First rate garden plant. Stays small.

S. *V. rhytidophyllum*, Leatherleaf Viburnum. See p. 189.

T. *V. rufidulum*, Southern Black Haw. Plant distinguished by its thick and shining leaves. Largest of the American species. No other Viburnum has such handsome

foliage. Rusty red felt covers the winter buds and the edges of the leaf stalks.

- S. *V. sargentii*, Sargent Cranberry Bush. Dark green leaves with long, narrow terminal lobes. Fruit comparatively small and dull colored.
- S. *V. tomentosum*, Doublefile Viburnum. Japan. Large flat-topped shrub. Wide-spreading, horizontal branches. Fruit at first, bright red and finally nearly black.
- S. *V. venosum canbyi*, Tall, round-topped shrub with large lustrous leaves, large flat clusters of flowers and bright blue fruit. Greatly improved by cultivation.
- S. *Viburnum wrightii*, Wright Viburnum. Japan. Bright red fruit. No American counterparts. See p. 189.
- V. *Vinca*, Myrtle. See p. 197-206.
Vines. See p. 207.
- V. *Vitis coignetiae*, Gloryvine. See p. 212.
- S. *Weigela*, Weigela. Many horticultural varieties with white, pink or red flowers and others with light or striped leaves. Rather a coarse shrub not to be used with natives.

Winter protection. See p. 89.

V. *Wisteria*, *Wisteria*. See p. 210.

D. *Zanthorhiza apiifolia*. Yellowroot. Autumn colors pale canary-yellow and green. Spread rapidly into dense masses which take entire possession of the ground. Small purple flowers are produced in terminal erect racemes and open before or with the leaves. Will not thrive in limestone soil. See p. 189-205.

THE END

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